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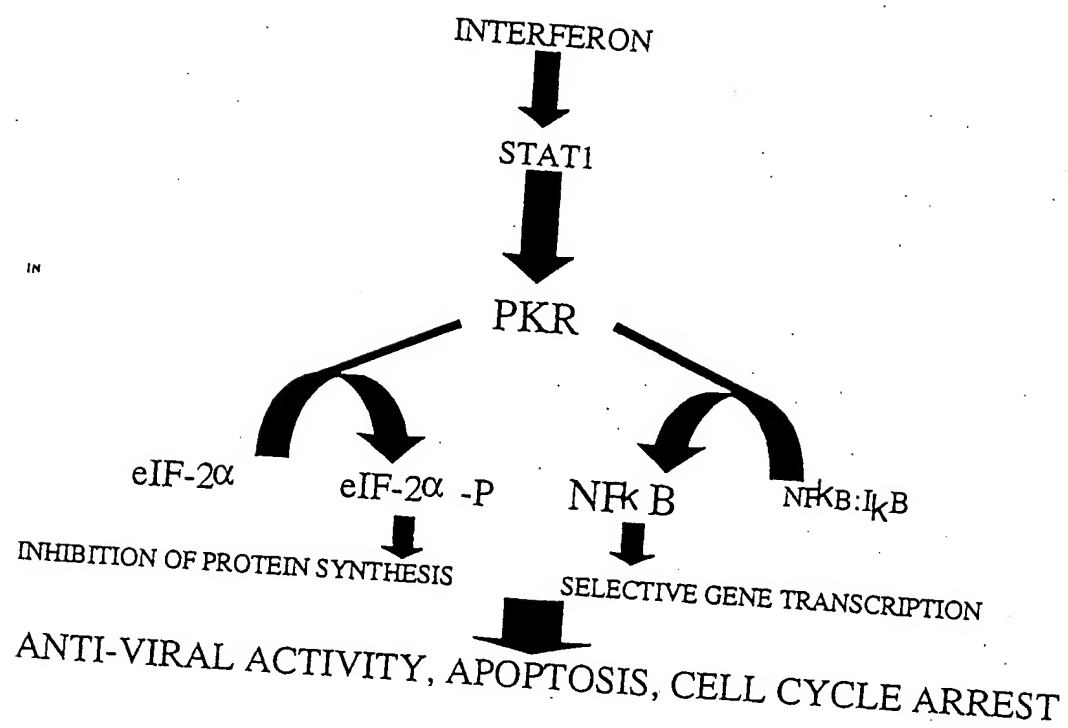


FIGURE 1

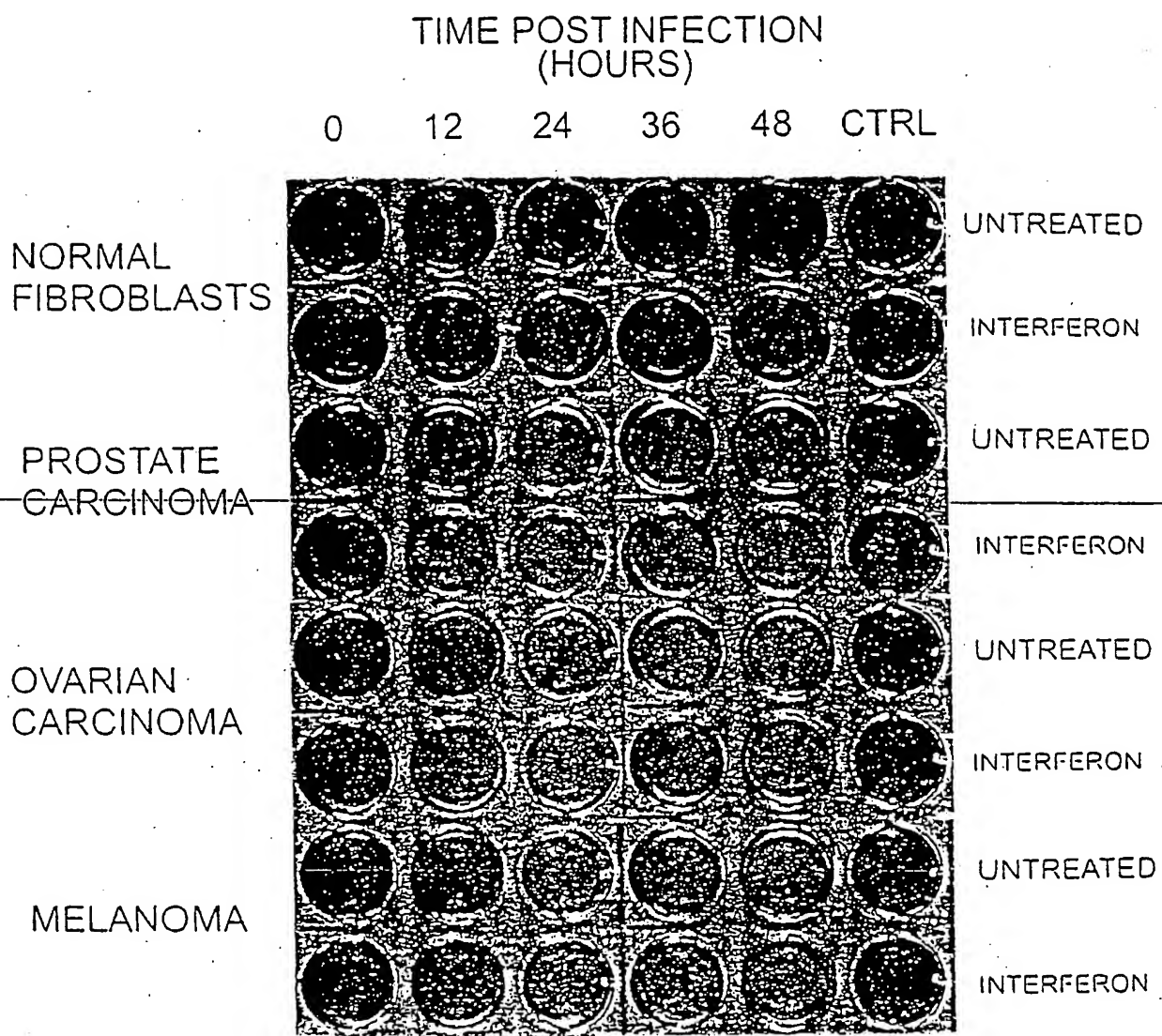
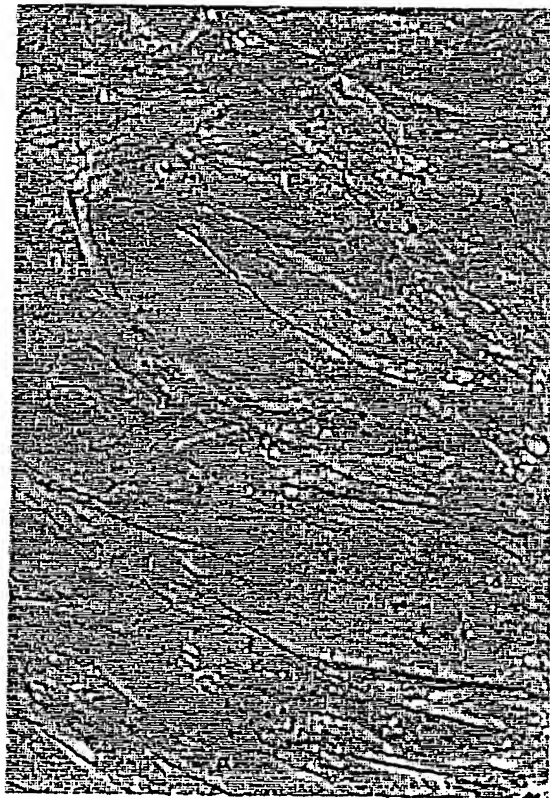
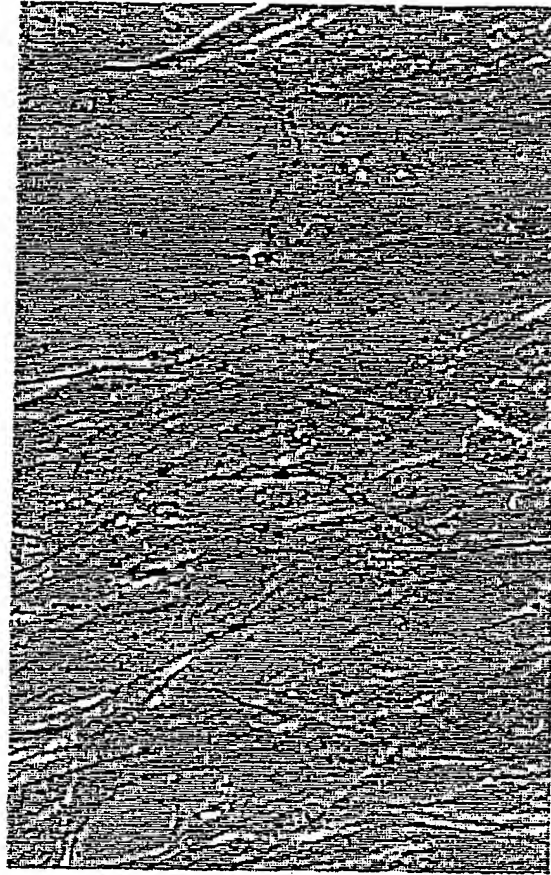


FIGURE 2

# VSV INFECTION OF NORMAL HUMAN FIBROBLASTS



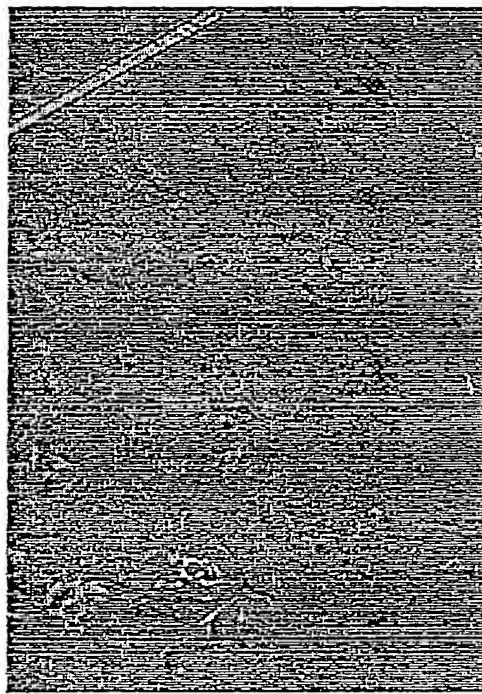
MOCK INFECTED



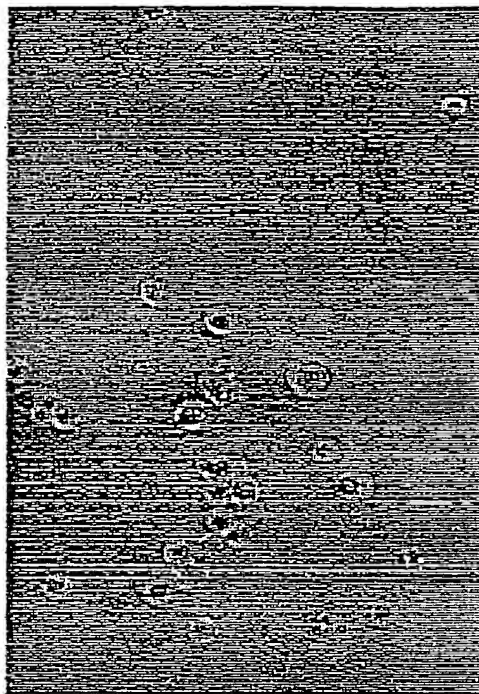
VSV MOI 1 PFU/18  
HOURS

FIGURE 3A

# VSV INFECTION OF OVCAR433



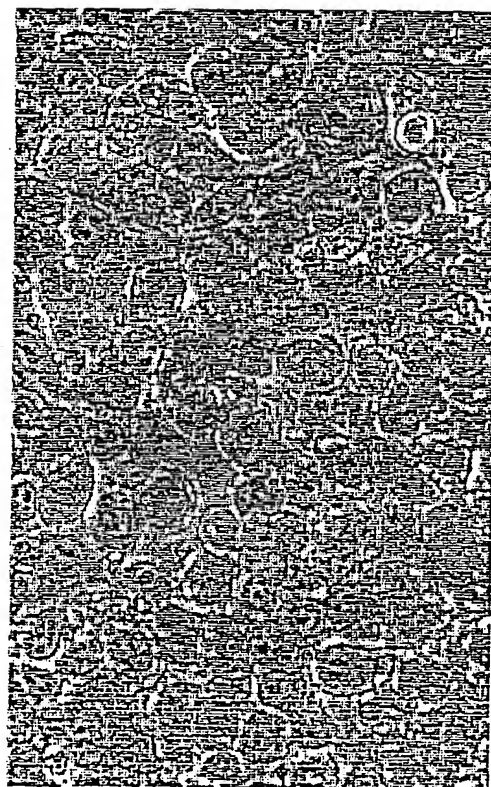
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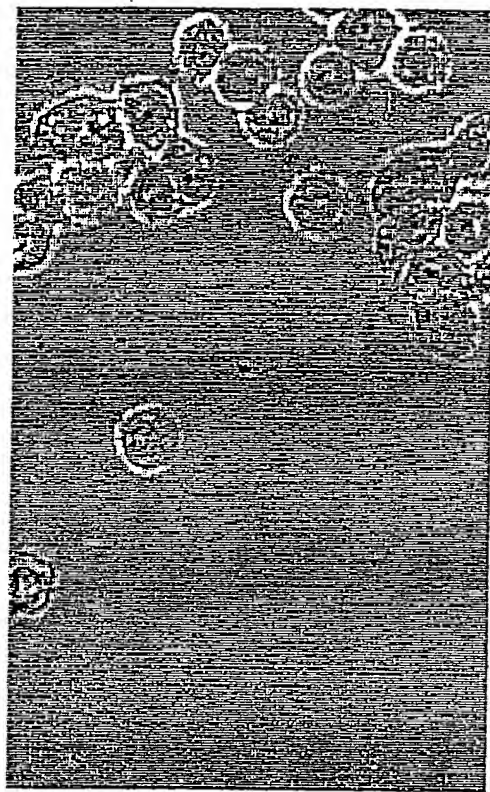
VSV 0.1PFU/18 HRS

FIGURE 3B

# VSV INFECTION OF KB CELLS



MOCK INFECTED



VSV moi 1 PFU/18HRS

FIGURE 3C

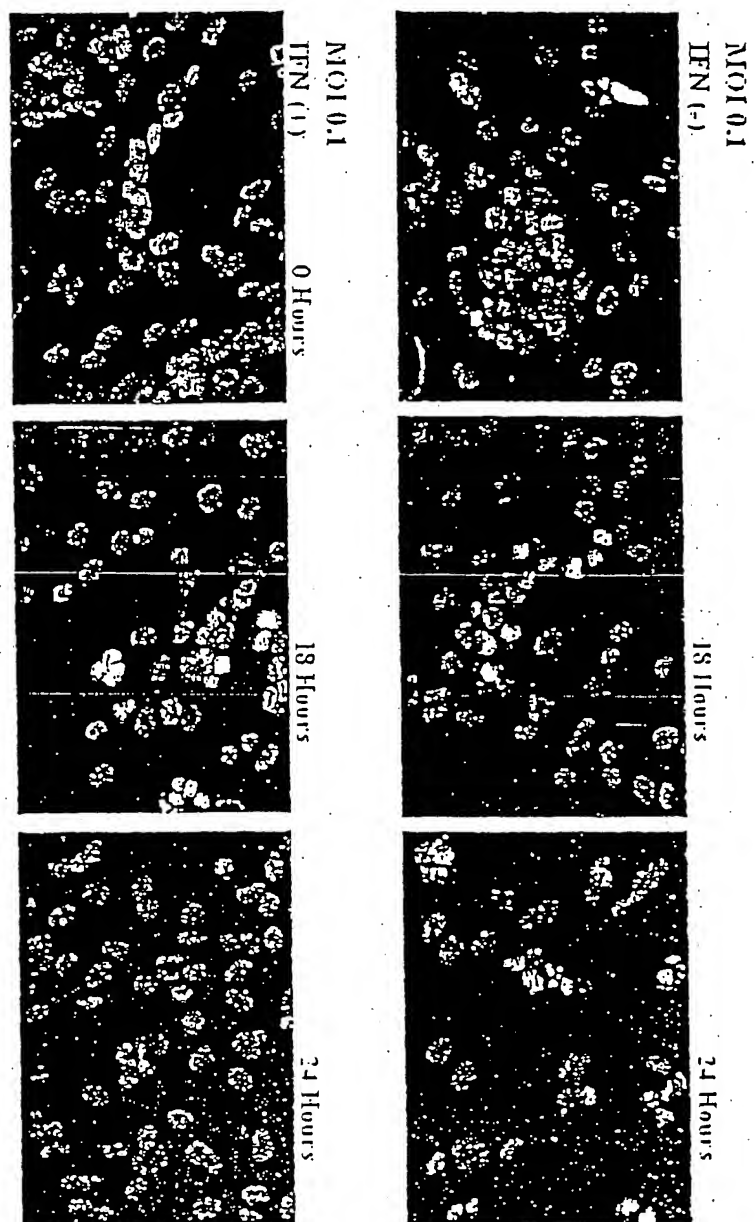


FIGURE <sup>4</sup>/<sub>8</sub>

# Nude Mouse Tumours

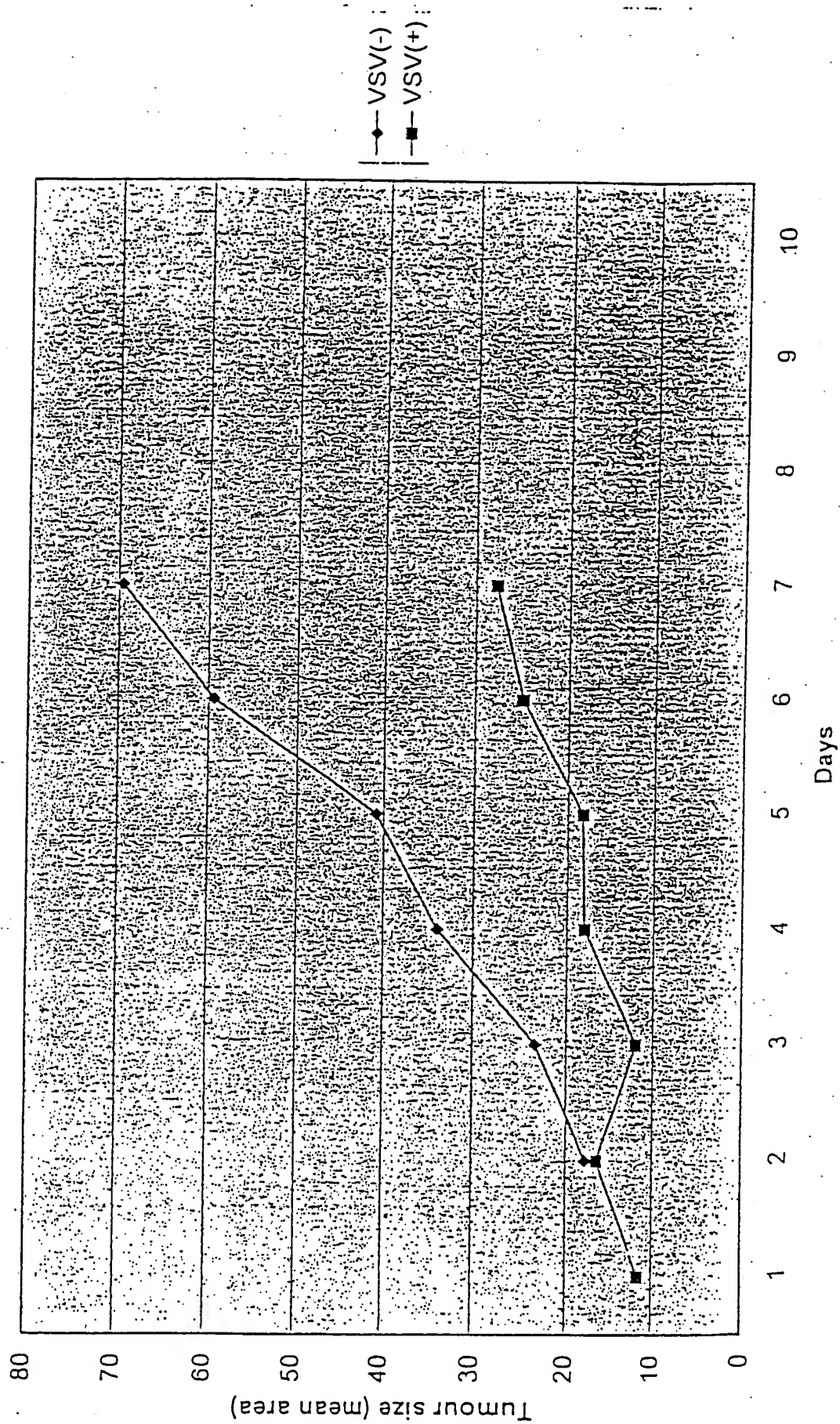
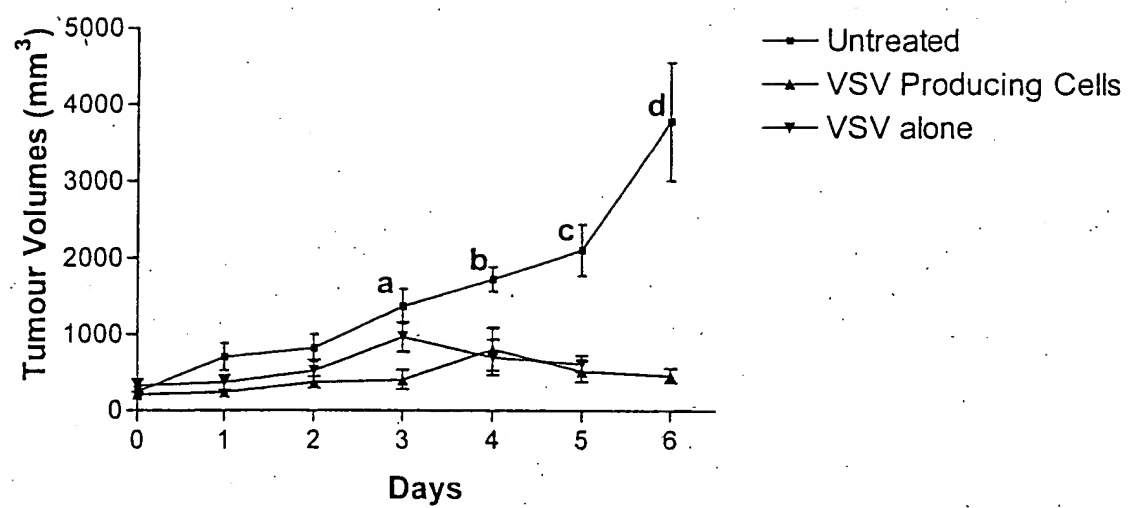


FIGURE 5

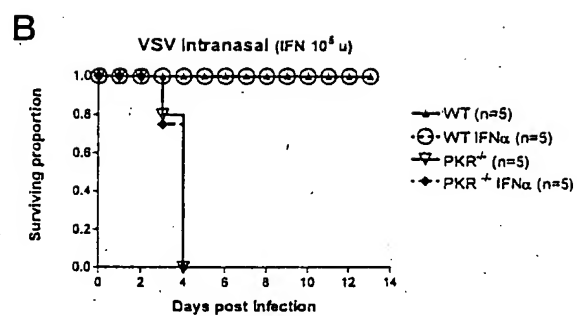
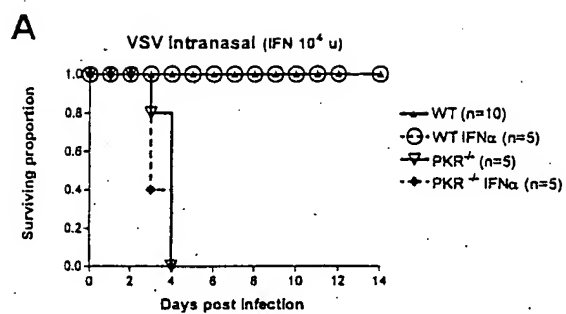




**FIGURE 6**



**FIGURE 7**



FIGURES 8A AND 8B

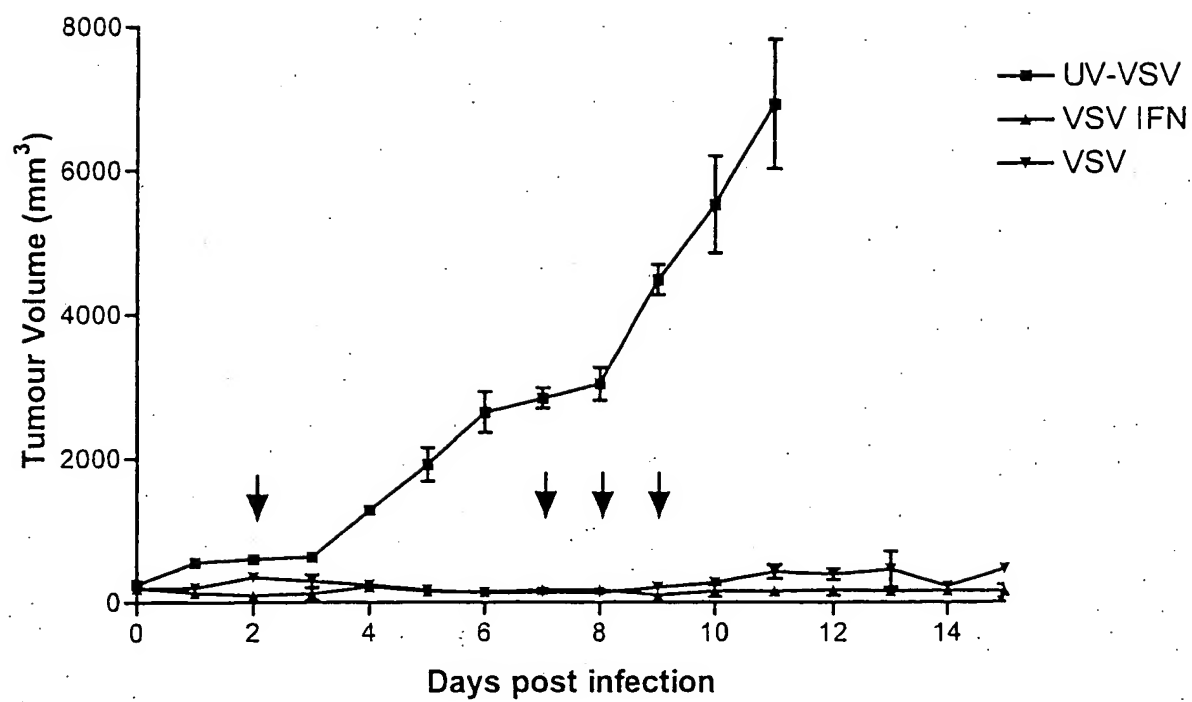


FIGURE 9

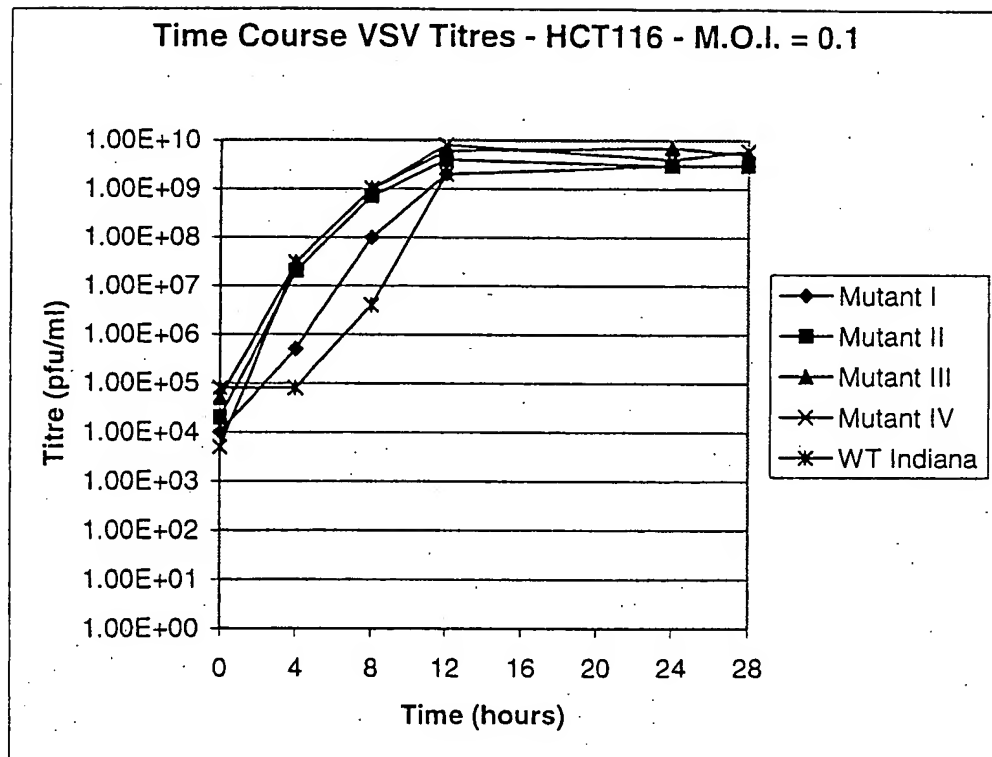


FIGURE 10A

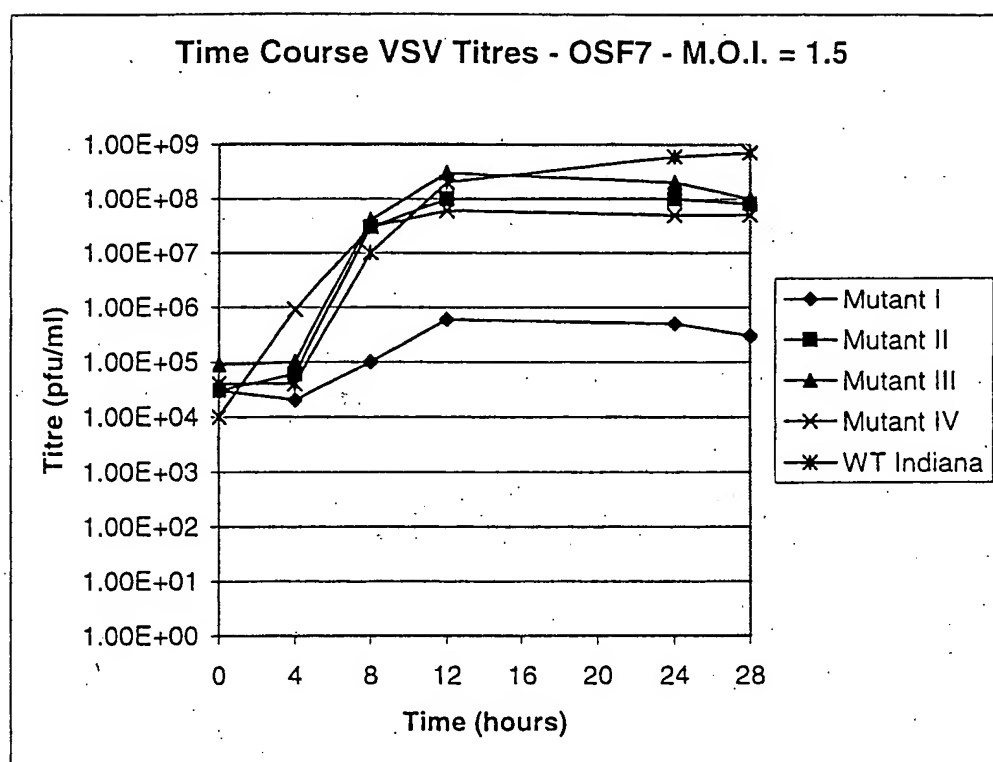


FIGURE 10B

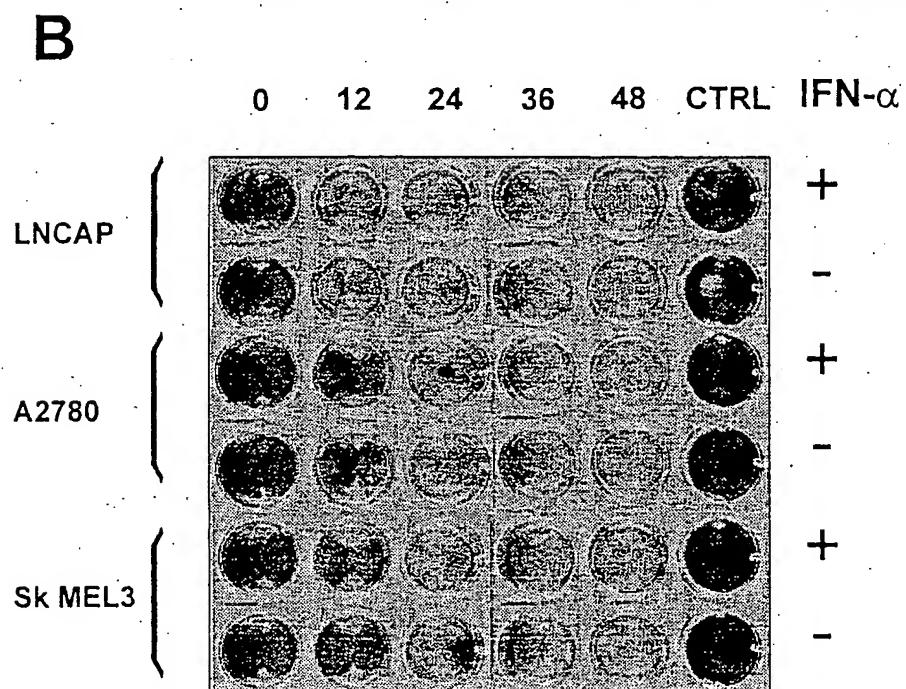
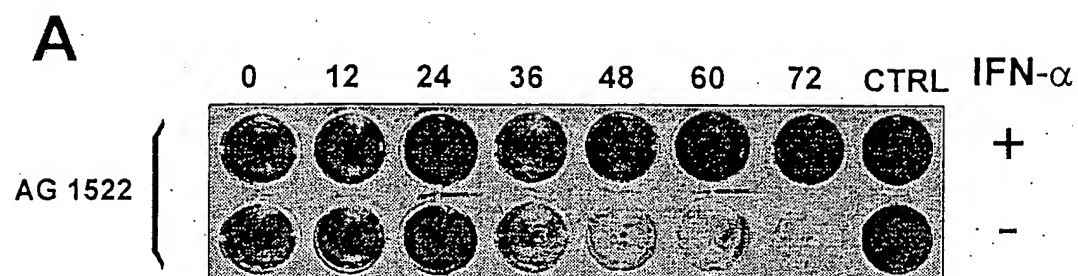


FIGURE 11

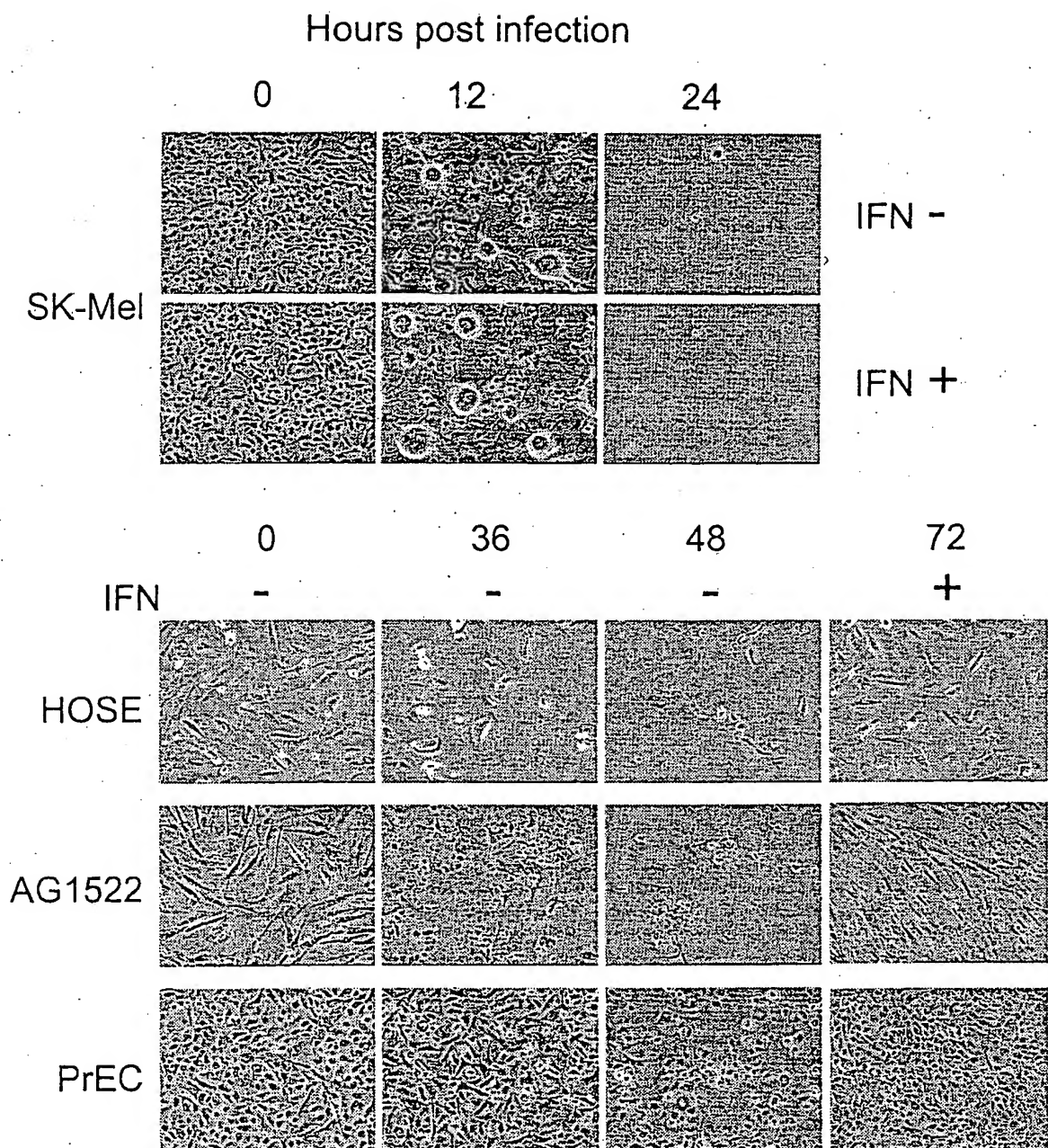
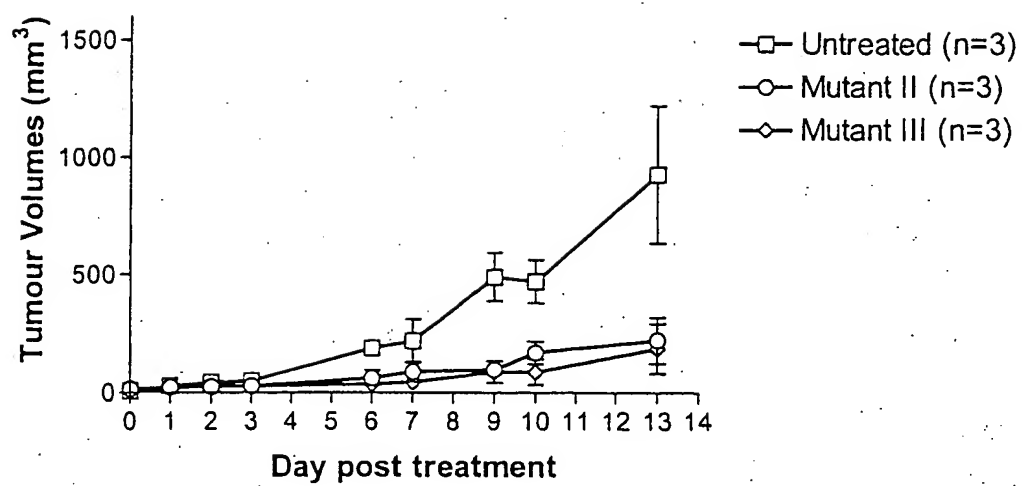


FIGURE 12





**FIGURE 13**

		1		60
GenBank	N	nucl.	ATGTCTGTTACAGTCAAGAGAATCATTGACAACACAGTCATAGTTCCAAAACCTTCCTGCA	
	HR	N	nucl.	ATGTCTGTTACAGTCAAGAGAATCATTGCAACACAGTCATAGTTCCAAAACCTTCCTGCA
	M2	N	nucl.	ATGTCTGTTACAGTCAAGAGAATCATTGACAACACAGTCATAGTTCCAAAACCTTCCTGCA
	M3	N	nucl.	ATGTCTGTTACAGTCAAGAGAATCATTGACAACACAGTCATAGTTCCAAAACCTTCCTGCA
	M4	N	nucl.	.....
		61		120
GenBank	N	nucl.	AATGAGGATCCAGTGGAAATACCCGGCAGATTACTTCAGAAAATCAAAGGAGATTTCCTCTT	
	HR	N	nucl.	AATGAGGATCCAGTGGAAATACCCGGCAGATTACTTCAGAAAATCAAAGGAGATTTCCTCTT
	M2	N	nucl.	AATGAGGATCCAGTGGAAATACCCGGCAGATTACTTCAGAAAATCAAAGGAGATTTCCTCTT
	M3	N	nucl.	AATGAGGATCCAGTGGAAATACCCGGCAGATTACTTCAGAAAATCAAAGGAGATTTCCTCTT
	M4	N	nucl.	.....
		121		180
GenBank	N	nucl.	TACATCAATACTACAAAAAGTTTGTCTAGATCTAAGAGGATATGTCTACCAAGGCCCTCAA	
	HR	N	nucl.	TACATCAATACTACAAAAAGTTTGTCTAGATCTAAGAGGATATGTCTACCAAGGCCCTCAA
	M2	N	nucl.	TACATCAATACTACAAAAAGTTTGTCTAGATCTAAGAGGATATGTCTACCAAGGCCCTCAA
	M3	N	nucl.	TACATCAATACTACAAAAAGTTTGTCTAGATCTAAGAGGATATGTCTACCAAGGCCCTCAA
	M4	N	nucl.	.....
		181		240
GenBank	N	nucl.	TCCGGAAATGTATCAATCATACATGTCAACAGCTACTTGTATGGAGCATTGAAGGACATC	
	HR	N	nucl.	TCCGGAAATGTATCAATCATACATGTCAACAGCTACTTGTATGGAGCATTGAAGGACATC
	M2	N	nucl.	TCCGGAAATGTATCAATCATACATGTCAACAGCTACTTGTATGGAGCATTGAAGGACATC
	M3	N	nucl.	TCCGGAAATGTATCAATCATACATGTCAACAGCTACTTGTATGGAGCATTGAAGGACATC
	M4	N	nucl.	.....TCAATCATACATGTCAACAGCTACTTGTATGGAGCATTGAAGGACATC
		241		300
GenBank	N	nucl.	CGGGGTAAGTTGGATAAAGATTGGTCAAGTTTCGGAATAAACATCGGGAAAGCAGGGGAT	
	HR	N	nucl.	CGGGGTAAGTTGGATAAAGATTGGTCAAGTTTCGGAATAAACATCGGGAAAGCAGGGGAT
	M2	N	nucl.	CGGGGTAAGTTGGATAAAGATTGGTCAAGTTTCGGAATAAACATCGGGAAAGCAGGGGAT
	M3	N	nucl.	CGGGGTAAGTTGGATAAAGATTGGTCAAGTTTCGGAATAAACATCGGGAAAGCAGGGGAT
	M4	N	nucl.	CGGGGTAAGTTGGATAAAGATTGGTCAAGTTTCGGAATAAACATCGGGAAAGCAGGGGAT
		301		360
GenBank	N	nucl.	ACAATCGGAATATTTGACCTTGTATCCTTGAAAGCCCTGGACGGGTACTTCCAGATGGA	
	HR	N	nucl.	ACAATCGGAATATTTGACCTTGTATCCTTGAAAGCCCTGGACGGGTACTTCCAGATGGA
	M2	N	nucl.	ACAATCGGAATATTTGACCTTGTATCCTTGAAAGCCCTGGACGGGTACTTCCAGATGGA
	M3	N	nucl.	ACAATCGGAATATTTGACCTTGTATCCTTGAAAGCCCTGGACGGGTACTTCCAGATGGA
	M4	N	nucl.	ACAATCGGAATATTTGACCTTGTATCCTTGAAAGCCCTGGACGGGTACTTCCAGATGGA
		361		420
GenBank	N	nucl.	GTATCGGATGCTTCCAGAACCAGCGCAGATGACAAATGGTTGCCTTTGTATCTACTTGGC	
	HR	N	nucl.	GTATCGGATGCTTCCAGAACCAGCGCAGATGACAAATGGTTGCCTTTGTATCTACTTGGC
	M2	N	nucl.	GTATCGGATGCTTCCAGAACCAGCGCAGATGACAAATGGTTGCCTTTGTATCTACTTGGC
	M3	N	nucl.	GTATCGGATGCTTCCAGAACCAGCGCAGATGACAAATGGTTGCCTTTGTATCTACTTGGC
	M4	N	nucl.	GTATCGGATGCTTCCAGAACCAGCGCAGATGACAAATGGTTGCCTTTGTATCTACTTGGC
		421		480
GenBank	N	nucl.	TTATACAGAGTGGGCAGAACACAAATGCCTGAATACAGAAAAAGGCTCATGGATGGGCTG	
	HR	N	nucl.	TTATACAGAGTGGGCAGAACACAAATGCCTGAATACAGAAAAAGGCTCATGGATGGGCTG
	M2	N	nucl.	TTATACAGAGTGGGCAGAACACAAATGCCTGAATACAGAAAAAGGCTCATGGATGGGCTG
	M3	N	nucl.	TTATACAGAGTGGGCAGAACACAAATGCCTGAATACAGAAAAAGGCTCATGGATGGGCTG
	M4	N	nucl.	TTATACAGAGTGGGCAGAACACAAATGCCTGAATACAGAAAAAGGCTCATGGATGGGCTG

FIGURE 14-1

		481	540
GenBank	N nucl.	ACAAATCAATGCAAAATGATCAATGAACAGTTTGAACCTCTTGTGCCAGAAGGTCGTGAC	
	HR N nucl.	ACAAATCAATGCAAAATGATCAATGAACAGTTTGAACCTCTTGTGCCAGAAGGTCGTGAC	
	M2 N nucl.	ACAAATCAATGCAAAATGATCAATGAACAGTTTGAACCTCTTGTGCCAGAAGGTCGTGAC	
	M3 N nucl.	ACAAATCAATGCAAAATGATCAATGAACAGTTTGAACCTCTTGTGCCAGAAGGTCGTGAC	
	M4 N nucl.	ACAAATCAATGCAAAATGATCAATGAACAGTTTGAACCTCTTGTGCCAGAAGGTCGTGAC	
		541	600
GenBank	N nucl.	ATTTTGTGATGTGTGGGAAATGACAGTAATTACACAAAAATTGTCGCTGCAGTGGACATG	
	HR N nucl.	ATTTTGTGATGTGTGGGAAATGACAGTAATTACACAAAAATTGTCGCTGCAGTGGACATG	
	M2 N nucl.	ATTTTGTGATGTGTGGGAAATGACAGTAATTACACAAAAATTGTCGCTGCAGTGGACATG	
	M3 N nucl.	ATTTTGTGATGTGTGGGAAATGACAGTAATTACACAAAAATTGTCGCTGCAGTGGACATG	
	M4 N nucl.	ATTTTGTGATGTGTGGGAAATGACAGTAATTACACAAAAATTGTCGCTGCAGTGGACATG	
		601	660
GenBank	N nucl.	TTCTTCCACATGTTCAAAAAACATGAATGTGCCTCGTTTCAGATACGGAACCTATTGTTTCC	
	HR N nucl.	TTCTTCCACATGTTCAAAAAACATGAATGTGCCTCGTTTCAGATACGGAACCTATTGTTTCC	
	M2 N nucl.	TTCTTCCACATGTTCAAAAAACATGAATGTGCCTCGTTTCAGATACGGAACCTATTGTTTCC	
	M3 N nucl.	TTCTTCCACATGTTCAAAAAACATGAATGTGCCTCGTTTCAGATACGGAACCTATTGTTTCC	
	M4 N nucl.	TTCTTCCACATGTTCAAAAAACATGAATGTGCCTCGTTTCAGATACGGAACCTATTGTTTCC	
		661	720
GenBank	N nucl.	AGATTCAAAGATTGTGCTGCATTGGCAACATTTGGACACCTCTGCAAAATAACCGGAATG	
	HR N nucl.	AGATTCAAAGATTGTGCTGCATTGGCAACATTTGGACACCTCTGCAAAATAACCGGAATG	
	M2 N nucl.	AGATTCAAAGATTGTGCTGCATTGGCAACATTTGGACACCTCTGCAAAATAACCGGAATG	
	M3 N nucl.	AGATTCAAAGATTGTGCTGCATTGGCAACATTTGGACACCTCTGCAAAATAACCGGAATG	
	M4 N nucl.	AGATTCAAAGATTGTGCTGCATTGGCAACATTTGGACACCTCTGCAAAATAACCGGAATG	
		721	780
GenBank	N nucl.	TCTACAGAAGATGTAACGACCTGGATCTTGAACCGAGAAGTTGCAGATGAGATGGTCCAA	
	HR N nucl.	TCTACAGAAGATGTAACGACCTGGATCTTGAACCGAGAAGTTGCAGATGAGATGGTCCAA	
	M2 N nucl.	TCTACAGAAGATGTAACGACCTGGATCTTGAACCGAGAAGTTGCAGATGAGATGGTCCAA	
	M3 N nucl.	TCTACAGAAGATGTAACGACCTGGATCTTGAACCGAGAAGTTGCAGATGAGATGGTCCAA	
	M4 N nucl.	TCTACAGAAGATGTAACGACCTGGATCTTGAACCGAGAAGTTGCAGATGAGATGGTCCAA	
		781	840
GenBank	N nucl.	ATGATGCTTCCAGGCCAAGAAATTGACAAGGCCGATTTCATACATGCCTTATTTGATCGAC	
	HR N nucl.	ATGATGCTTCCAGGCCAAGAAATTGACAAGGCCGATTTCATACATGCCTTATTTGATCGAC	
	M2 N nucl.	ATGATGCTTCCAGGCCAAGAAATTGACAAGGCCGATTTCATACATGCCTTATTTGATCGAC	
	M3 N nucl.	ATGATGCTTCCAGGCCAAGAAATTGACAAGGCCGATTTCATACATGCCTTATTTGATCGAC	
	M4 N nucl.	ATGATGCTTCCAGGCCAAGAAATTGACAAGGCCGATTTCATACATGCCTTATTTGATCGAC	
		841	900
GenBank	N nucl.	TTTGGATTGTCTTCTAAGTCTCCATATTCTTCCGTCAAAAACCCTGCCTTCCACTTCTGG	
	HR N nucl.	TTTGGATTGTCTTCTAAGTCTCCATATTCTTCCGTCAAAAACCCTGCCTTCCACTTCTGG	
	M2 N nucl.	TTTGGATTGTCTTCTAAGTCTCCATATTCTTCCGTCAAAAACCCTGCCTTCCACTTCTGG	
	M3 N nucl.	TTTGGATTGTCTTCTAAGTCTCCATATTCTTCCGTCAAAAACCCTGCCTTCCACTTCTGG	
	M4 N nucl.	TTTGGATTGTCTTCTAAGTCTCCATATTCTTCCGTCAAAAACCCTGCCTTCCACTTCTGG	

FIGURE 14-2

		901		960
GenBank	N nucl.	GGGCAATTGACAGCTCTTCTGCTCAGATCCACCAGAGCAAGGAATGCCCCGACAGCCTGAT		
	HR	N nucl.	GGGCAATTGACAGCTCTTCTGCTCAGATCCACCAGAGCAAGGAATGCCCCGACAGCCTGAT	
	M2	N nucl.	GGGCAATTGACAGCTCTTCTGCTCAGATCACCAGAGCAAGGAATGCCCCGACAGCCTGAT	
	M3	N nucl.	GGGCAATTGACAGCTCTTCTGCTCAGATCCACCAGAGCAAGGAATGCCCCGACAGCCTGAT	
	M4	N nucl.	GGGCAATTGAC.....T	
		961		1020
GenBank	N nucl.	GACATTGAGTATACATCTCTTACTACAGCAGGTTTGTGTACGCTTATGCAGTAGGATCC		
	HR	N nucl.	GACATTGAGTATACATCTCTTACTACAGCAGGTTTGTGTACGCTTATGCAGTAGGATCC	
	M2	N nucl.	GACATTGAGTATACATCTCTTACTACAGCAGGTTTGTGTACGCTTATGCAGTAGGATCC	
	M3	N nucl.	GACATTGAGTATACATCTCTTACTACAGCAGGTTTGTGTACGCTTATGCAGTAGGATCC	
	M4	N nucl.	GACATTGAGTATACATCTCTTACTACAGCAGGTTTGTGTACGCTTATGCAGTAGGATCC	
		1021		1080
GenBank	N nucl.	TCTGCTGACTTGGCACAACAGTTTTGTGTTGGAGATACAAATACACTCCAGATGATAGT		
	HR	N nucl.	TCTGCTGACTTGGCACAACAGTTTTGTGTTGGAGATAGCAAATACACTCCAGATGATAGT	
	M2	N nucl.	TCTGCTGACTTGGCACAACAGTTTTGTGTTGGAGATAGCAAATACACTCCAGATGATAGT	
	M3	N nucl.	TCTGCTGACTTGGCACAACAGTTTTGTGTTGGAGATAGCAAATACACTCCAGATGATAGT	
	M4	N nucl.	TCTGCTGACTTGGCACAACAGTTTTGTGTTGGAGATAGCAAATACACTCCAGATGATAGT	
		1081		1140
GenBank	N nucl.	ACCGGAGGATTGACGACTAATGCACCGCCACAAGGCAGAGATGTGGTTCGAATGGCTCGGA		
	HR	N nucl.	ACCGGAGGATTGACGACTAATGCACCGCCACAAGGCAGAGATGTGGTTCGAATGGCTCGGA	
	M2	N nucl.	ACCGGAGGATTGACGACTAATGCACCGCCACAAGGCAGAGATGTGGTTCGAATGGCTCGGA	
	M3	N nucl.	ACCGGAGGATTGACGACTAATGCACCGCCACAAGGCAGAGATGTGGTTCGAATGGCTCGGA	
	M4	N nucl.	ACCGGAGGATTGACGACTAATGCACCGCCACAAGGCAGAGATGTGGTTCGAATGGCTCGGA	
		1141		1200
GenBank	N nucl.	TGGTTTGAAGATCAAAACAGAAAACCGACTCCTGATATGATGCAGTATGCGAAACGAGCA		
	HR	N nucl.	TGGTTTGAAGATCAAAACAGAAAACCGACTCCTGATATGATGCAGTATGCGAAACGAGCA	
	M2	N nucl.	TGGTTTGAAGATCAAAACAGAAAACCGACTCCTGATATGATGCAGTATGCGAAACGAGCA	
	M3	N nucl.	TGGTTTGAAGATCAAAACAGAAAACCGACTCCTGATATGATGCAGTATGCGAAACGAGCA	
	M4	N nucl.	TGGTTTGAAGATCAAAACAGAAAACCGACTCCTGATATGATGCAGTATGCGAAACGAGCA	
		1201		1260
GenBank	N nucl.	GTCATGTCACTGCAAGGCCTAAGAGAGAAGACAATTGGCAAGTATGCTAAGTCAGAATTT		
	HR	N nucl.	GTCATGTCACTGCAAGGCCTAAGAGAGAAGACAATTGGCAAGTATGCTAAGTCAGAATTT	
	M2	N nucl.	GTCATGTCACTGCAAGGCCTAAGAGAGAAGACAATTGGCAAGTATGCTAAGTCAGAATTT	
	M3	N nucl.	GTCATGTCACTGCAAGGCCTAAGAGAGAAGACAATTGGCAAGTATGCTAAGTCAGAATTT	
	M4	N nucl.	GTCATGTCACTGCAAGGCCTAAGAGAGAAGACAATTGGCAAGTATGCTAAGTCAGAATTT	
		1261	1269	
GenBank	N nucl.	GACAAATGA		
	HR	N nucl.	GACAAATGA	
	M2	N nucl.	GACAAATGA	
	M3	N nucl.	GACAAATGA	
	M4	N nucl.	GACAAATGA	

FIGURE 14-3

		1		60
GenBank	N a. a.	MSVTVKRIIDNTVIVPKLPANEDPVEYPADYFRKSKEIPLYINTTKSLSDLRGYVYQGLK		
	HR	N a. a.	MSVTVKRIIDNTVIVPKLPANEDPVEYPADYFRKSKEIPLYINTTKSLSDLRGYVYQGLK	
	M3	N a. a.	MSVTVKRIIDNTVIVPKLPANEDPVEYPADYFRKSKEIPLYINTTKSLSDLRGYVYQGLK	
	M4	N a. a.	.....	
		61		120
GenBank	N a. a.	SGNVSI IHVNSYLYGALKDIRGKLDKDWSSFGINIGKAGDTIGIFDLVSLKALDGVLPDG		
	HR	N a. a.	SGNVSI IHVNSYLYGALKDIRGKLDKDWSSFGINIGKAGDTIGIFDLVSLKALDGVLPDG	
	M3	N a. a.	SGNVSI IHVNSYLYGALKDIRGKLDKDWSSFGINIGKAGDTIGIFDLVSLKALDGVLPDG	
	M4	N a. a.	....SI IHVNSYLYGALKDIRGKLDKDWSSFGINIGKAGDTIGIFDLVSLKALDGVLPDG	
		121		180
GenBank	N a. a.	VSDASRTSADDKWLPLYLLGLYRVGRTQMPEYRK <del>Q</del> LM DGLTNQCKMINEQFEPLVPEGRD		
	HR	N a. a.	VSDASRTSADDKWLPLYLLGLYRVGRTQMPEYRKRLMDGLTNQCKMINEQFEPLVPEGRD	
	M3	N a. a.	VSDASRTSADDKWLPLYLLGLYRVGRTQMPEYRKRLMDGLTNQCKMINEQFEPLVPEGRD	
	M4	N a. a.	VSDASRTSADDKWLPLYLLGLYRVGRTQMPEYRKRLMDGLTNQCKMINEQFEPLVPEGRD	
		181		240
GenBank	N a. a.	IFDVWGND SNYTKIVA AVMFFHMFKKHECASFRYGTIVSRFKDCAALATFGHLCKITGM		
	HR	N a. a.	IFDVWGND SNYTKIVA AVMFFHMFKKHECASFRYGTIVSRFKDCAALATFGHLCKITGM	
	M3	N a. a.	IFDVWGND SNYTKIVA AVMFFHMFKKHECASFRYGTIVSRFKDCAALATFGHLCKITGM	
	M4	N a. a.	IFDVWGND SNYTKIVA AVMFFHMFKKHECASFRYGTIVSRFKDCAALATFGHLCKITGM	
		241		300
GenBank	N a. a.	STEDVTTWILNREVADEMVMMLPGQEIDKADSYMPYLIDFGLSSKSPYSSVKNP AFHFW		
	HR	N a. a.	STEDVTTWILNREVADEMVMMLPGQEIDKADSYMPYLIDFGLSSKSPYSSVKNP AFHFW	
	M3	N a. a.	STEDVTTWILNREVADEMVMMLPGQEIDKADSYMPYLIDFGLSSKSPYSSVKNP AFHFW	
	M4	N a. a.	STEDVTTWILNREVADEMVMMLPGQEIDKADSYMPYLIDFGLSSKSPYSSVKNP AFHFW	
		301		360
GenBank	N a. a.	GQLTALLRSTRARNARQPDDIEYTSLT TAGLLYAYAVGSSADLAQQFCVGD <del>Q</del> KYTPDDS		
	HR	N a. a.	GQLTALLRSTRARNARQPDDIEYTSLT TAGLLYAYAVGSSADLAQQFCVGD SKYTPDDS	
	M3	N a. a.	GQLTALLRSTRARNARQPDDIEYTSLT TAGLLYAYAVGSSADLAQQFCVGD SKYTPDDS	
	M4	N a. a.	GQLT.....DIEYTS <del>Q</del> TTAGLLYAYAVGSSADLA <del>Q</del> FCVGD SKYTPDDS	
		361		420
GenBank	N a. a.	TGGLTTNAPPQGRDVVEWLGFEDQNRKPTPDMMQYAKRAVMSLQGLREKTIGKYAKSEF		
	HR	N a. a.	TGGLTTNAPPQGRDVVEWLGFEDQNRKPTPDMMQYAKRAVMSLQGLREKTIGKYAKSEF	
	M3	N a. a.	TGGLTTNAPPQGRDVVEWLGFEDQNRKPTPDMMQYAKRAVMSLQGLREKTIGKYAKSEF	
	M4	N a. a.	TGGLTTNAPPQGRDVVEWLGFEDQNRKPTPDMMQYAKRAVMSLQGLREKTIGKYAKSEF	
		421 423		
GenBank	N a. a.	DK.		
	HR	N a. a.	DK.	
	M3	N a. a.	DK.	
	M4	N a. a.	DK.	

FIGURE 15

		1	60
GenBank	P nucl.	ATGGATAATCTCACAAAAGTTCGTGAGTATCTCAAGTCCTATTCTCGTCTGATCAGGCG	
	HR P nucl.	ATGGATAATCTCACAAAAGTTCGTGAGTATCTCAAGTCCTATTCTCGTCTAGATCAGGCG	
	M2 P nucl.	ATGGATAATCTCACAAAAGTTCGTGAGTATCTCAAGTCCTATTCTCGTCTAGATCAGGCG	
	M3 P nucl.	ATGGATAATCTCACAAAAGTTCGTGAGTATCTCAAGTCCTATTCTCGTCTAGATCAGGCG	
	M4 P nucl.	ATGGATAATCTCACAAAAGTTCGTGAGTATCTCAAGTCCTATTCTCGTCTAGATCAGGCG	
		61	120
GenBank	P nucl.	GTAGGAGAGATAGATGAGATCGAAGCACAACGAGCTGAAAAGTCCAATTATGAGTTGTTT	
	HR P nucl.	GTAGGAGAGATAGATGAGATCGAAGCACAACGAGCTGAAAAGTCCAATTATGAGTTGTTT	
	M2 P nucl.	GTAGGAGAGATAGATGAGATCGAAGCACAACGAGCTGAAAAGTCCAATTATGAGTTGTTT	
	M3 P nucl.	GTAGGAGAGATAGATGAGATCGAAGCACAACGAGCTGAAAAGTCCAATTATGAGTTGTTT	
	M4 P nucl.	GTAGGAGAGATAGATGAGATCGAAGCACAACGAGCTGAAAAGTCCAATTATGAGTTGTTT	
		121	180
GenBank	P nucl.	CAAGAGGAGGAGTGGAGAGCATACTAGGCCCTCTTATTTTCAGGCAGCAGATGATTCT	
	HR P nucl.	CAAGAGGAGGAGTGGAGAGCATACTAGGCCCTCTTATTTTCAGGCAGCAGATGATTCT	
	M2 P nucl.	CAAGAGGAGGAGTGGAGAGCATACTAGGCCCTCTTATTTTCAGGCAGCAGATGATTCT	
	M3 P nucl.	CAAGAGGAGGAGTGGAGAGCATACTAGGCCCTCTTATTTTCAGGCAGCAGATGATTCT	
	M4 P nucl.	CAAGAGGAGGAGTGGAGAGCATACTAGGCCCTCTTATTTTCAGGCAGCAGATGATTCT	
		181	240
GenBank	P nucl.	GACACAGAATCTGAACCAGAAATTGAAGACAATCAAGGCTTGTATGTACAGATCCGAA	
	HR P nucl.	GACACAGAATCTGAACCAGAAATTGAAGACAATCAAGGCTTGTATGTACAGATCCGAA	
	M2 P nucl.	GACACAGAATCTGAACCAGAAATTGAAGACAATCAAGGCTTGTATGTACAGATCCGAA	
	M3 P nucl.	GACACAGAATCTGAACCAGAAATTGAAGACAATCAAGGCTTGTATGTACAGATCCGAA	
	M4 P nucl.	GACACAGAATCTGAACCAGAAATTGAAGACAATCAAGGCTTGTATGTACAGATCCGAA	
		241	300
GenBank	P nucl.	GCTGAGCAAGTTGAAGGCTTTTATACAGGGGCCCTTTAGATGACTATGCGATGAGGAAGTG	
	HR P nucl.	GCTGAGCAAGTTGAAGGCTTTTATACAGGGGCCCTTTAGATGACTATGCGGATGAGGACGTG	
	M2 P nucl.	GCTGAGCAAGTTGAAGGCTTTTATACAGGGGCCCTTTAGATGACTATGCGGATGAGGACGTG	
	M3 P nucl.	GCTGAGCAAGTTGAAGGCTTTTATACAGGGGCCCTTTAGATGACTATGCGGATGAGGACGTG	
	M4 P nucl.	GCTGAGCAAGTTGAAGGCTTTTATACAGGGGCCCTTTAGATGACTATGCGGATGAGGACGTG	
		301	360
GenBank	P nucl.	GATGTTGTATTCACTTCGGACTGGAAACAGCCTGAGCTTGAATCCGACGAGCATGGAAAG	
	HR P nucl.	GATGTTGTATTCACTTCGGACTGGAAACAGCCTGAGCTTGAATCCGACGAGCATGGAAAG	
	M2 P nucl.	GATGTTGTATTCACTTCGGACTGGAAACAGCCTGAGCTTGAATCCGACGAGCATGGAAAG	
	M3 P nucl.	GATGTTGTATTCACTTCGGACTGGAAACAGCCTGAGCTTGAATCCGACGAGCATGGAAAG	
	M4 P nucl.	GATGTTGTATTCACTTCGGACTGGAAACAGCCTGAGCTTGAATCCGACGAGCATGGAAAG	
		361	420
GenBank	P nucl.	ACCTTACGGTTGACATTGCCAGAGGGTTTAAAGTGGAGAGCAGAAATCCCAGTGGCTTTTG	
	HR P nucl.	ACCTTACGGTTGACATTGCCAGAGGGTTTAAAGTGGAGAGCAGAAATCCCAGTGGCTTTTG	
	M2 P nucl.	ACCTTACGGTTGACATTGCCAGAGGGTTTAAAGTGGAGAGCAGAAATCCCAGTGGCTTTTG	
	M3 P nucl.	ACCTTACGGTTGACATTGCCAGAGGGTTTAAAGTGGAGAGCAGAAATCCCAGTGGCTTTTG	
	M4 P nucl.	ACCTTACGGTTGACATTGCCAGAGGGTTTAAAGTGGAGAGCAGAAATCCCAGTGGCTTTTG	

FIGURE 16-1

		421		480
GenBank	P nucl.	ACGATTAAAGCAGTCGTCAAAGTGCCAAACTGGAATCTGGCAGAGTGCACATTTGAA		
	HR P nucl.	ACGATTAAAGCAGTCGTTCAAAGTGCCAAACACTGGAATCTGGCAGAGTGCACATTTGAA		
	M2 P nucl.	ACGATTAAAGCAGTCGTTCAAAGTGCCAAACACTGGAATCTGGCAGAGTGCACATTTGAA		
	M3 P nucl.	ACGATTAAAGCAGTCGTTCAAAGTGCCAAACACTGGAATCTGGCAGAGTGCACATTTGAA		
	M4 P nucl.	ACGATTAAAGCAGTCGTTCAAAGTGCCAAACACTGGAATCTGGCAGAGTGCACATTTGAA		
		481		540
GenBank	P nucl.	GCATCGGGAGAAGGGGTCATATCAAGCGCCAGATAACTCCGGATGTATATAAGGTC		
	HR P nucl.	GCATCGGGAGAAGGGGTCATCATAAAAAAGCGCCAGATAACTCCGGATGTATATAAGGTC		
	M2 P nucl.	GCATCGGGAGAAGGGGTCATCATAAAAAAGCGCCAGATAACTCCGGATGTATATAAGGTC		
	M3 P nucl.	GCATCGGGAGAAGGGGTCATCATAAAAAAGCGCCAGATAACTCCGGATGTATATAAGGTC		
	M4 P nucl.	GCATCGGGAGAAGGGGTCATCATAAAAAAGCGCCAGATAACTCCGGATGTATATAAGGTC		
		541		600
GenBank	P nucl.	ACTCCAGTGATGAACACACATCCGTCCCAATCAGAAGCGTATCAGATGTTTGGTCTCTC		
	HR P nucl.	ACTCCAGTGATGAACACACATCCGTCCCAATCAGAAGCCGTATCAGATGTTTGGTCTCTC		
	M2 P nucl.	ACTCCAGTGATGAACACACATCCGTCCCAA.....		
	M3 P nucl.	ACTCCAGTGATGAACACACATCCGTCCCAATCGAAGCCGTATCAGATGTTTGGTCTCTC		
	M4 P nucl.	ACTCCAGTGATGAACACACATCCGTCCCAATCAGAAGCCGTATCAGATGTTTGGTCTCTC		
		601		660
GenBank	P nucl.	TCAAAGACATCCATGACTTTCCAACCCAAGAAAGCAAGTCTTCAGCCTCTCACCATATCC		
	HR P nucl.	TCAAAGACATCCATGACTTTCCAACCCAAGAAAGCAAGTCTTCAGCCTCTCACCATATCC		
	M2 P nucl.	.....		
	M3 P nucl.	TCAAAGACATCCATGACTTTCCAACCCAAGAAAGCAAGTCTTCAGCCTCTCACCATATCC		
	M4 P nucl.	TCAAAGACATCCATGACTTTCCAACCCAAGAAAGCAAGTCTTCAGCCTCTCACCATATCC		
		661		720
GenBank	P nucl.	TTGGATGAATTGTTCTCATCTAGAGGAGAATTCATCTCTGTCTCGGAGGTACGGACGAATG		
	HR P nucl.	TTGGATGAATTGTTCTCATCTAGAGGAGAATTCATCTCTGTCTCGGAGGTAACGGACGAATG		
	M2 P nucl.	.....		
	M3 P nucl.	TTGGATGAATTGTTCTCATCTAGAGGAGAATTCATCTCTGTCTCGGAGGTAACGGACGAATG		
	M4 P nucl.	TTGGATGAATTGTTCTCATCTAGAGGAGAATTCATCTCTGTCTCGGAGGTAACGGACGAATG		
		721		780
GenBank	P nucl.	TCTCATAAAGAGGCCATCCTGCTCGGCTGAGTACAAAAAGTTGTACAATCAGGCGAGA		
	HR P nucl.	TCTCATAAAGAGGCCATCCTGCTCGGTCTGAGGTACAAAAAGTTGTACAATCAGGCGAGA		
	M2 P nucl.	.....		
	M3 P nucl.	TCTCATAAAGAGGCCATCCTGCTCGGTCTGAGGTACAAAAAGTTGTACAATCAGGCGAGA		
	M4 P nucl.	TCTCATAAAGAGGCCATCCTGCTCGGTCTGAGGTACAAAAAGTTGTACAATCAGGCGAGA		
		781	798	
GenBank	P nucl.	GTCAAATATTCTCTGTAG		
	HR P nucl.	GTCAAATATTCTCTGTAG		
	M2 P nucl.	.....		
	M3 P nucl.	GTCAAATATTCTCTGTAG		
	M4 P nucl.	GTCAAATATTCTCTGTAG		

FIGURE 16-2

		1		60
GenBank	P a . a .	MDNLT	TKVREYLKSYSRLDQAVGEIDEIEAQRAEKSNYELFQEDGVEEHT	PSYFQAADDS
	HR	P a . a .	MDNLT	TKVREYLKSYSRLDQAVGEIDEIEAQRAEKSNYELFQEDGVEEHTRPSYFQAADDS
	M2	P a . a .	MDNLT	TKVREYLKSYSRLDQAVGEIDEIEAQRAEKSNYELFQEDGVEEHTRPSYFQAADDS
	M3	P a . a .	MDNLT	TKVREYLKSYSRLDQAVGEIDEIEAQRAEKSNYELFQEDGVEEHTRPSYFQAADDS
	M4	P a . a .	MDNLT	TKVREYLKSYSRLDQAVGEIDEIEAQRAEKSNYELFQEDGVEEHTRPSYFQAADDS
		61		120
GenBank	P a . a .	DTESEPEIEDNQGLY	QDPEAEQVEGFIQGPLDDYADE	VDDVFTSDWKQPELESDEHGK
	HR	P a . a .	DTESEPEIEDNQGLYVPDPEAEQVEGFIQGPLDDYADE	VDDVFTSDWKQPELESDEHGK
	M2	P a . a .	DTESEPEIEDNQGLYVPDPEAEQVEGFIQGPLDDYADE	VDDVFTSDWKQPELESDEHGK
	M3	P a . a .	DTESEPEIEDNQGLYVPDPEAEQVEGFIQGPLDDYADE	VDDVFTSDWKQPELESDEHGK
	M4	P a . a .	DTESEPEIEDNQGLYVPDPEAEQVEGFIQGPLDDYADE	VDDVFTSDWKQPELESDEHGK
		121		180
GenBank	P a . a .	TLRLT	SPEGLSGEQKSQWLSTIKAVVQSAKWNLAECTFEASGEGVI	KRQITPDVYKV
	HR	P a . a .	TLRLTLPEGLSGEQKSQWLLTIKAVVQSAKHWNLAECTFEASGEGVI	IKKRQITPDVYKV
	M2	P a . a .	TLRLTLPEGLSGEQKSQWLLTIKAVVQSAKHWNLAECTFEASGEGVI	IKKRQITPDVYKV
	M3	P a . a .	TLRLTLPEGLSGEQKSQWLLTIKAVVQSAKHWNLAECTFEASGEGVI	IKKRQITPDVYKV
	M4	P a . a .	TLRLTLPEGLSGEQKSQWLLTIKAVVQSAKHWNLAECTFEASGEGVI	IKKRQITPDVYKV
		181		240
GenBank	P a . a .	TPVMNTHPSQSEAVSDVWSLSKTSMTFQPKKASLQPLTISLDEL	FSSRGEFISVGG	GRM
	HR	P a . a .	TPVMNTHPSQSEAVSDVWSLSKTSMTFQPKKASLQPLTISLDEL	FSSRGEFISVGGNGRM
	M2	P a . a .	TPVMNTHPSQ	.....
	M3	P a . a .	TPVMNTHPSQSEAVSDVWSLSKTSMTFQPKKASLQPLTISLDEL	FSSRGEFISVGGNGRM
	M4	P a . a .	TPVMNTHPSQSEAVSDVWSLSKTSMTFQPKKASLQPLTISLDEL	FSSRGEFISVGGNGRM
		241		266
GenBank	P a . a .	SHKEA	ILLGLRYKKLYNQARVKYSL	
	HR	P a . a .	SHKEA	ILLGLRYKKLYNQARVKYSL
	M2	P a . a .	.....	
	M3	P a . a .	SHKEA	ILLGLRYKKLYNQARVKYSL
	M4	P a . a .	SHKEA	ILLGLRYKKLYNQARVKYSL

FIGURE 17



		1	60
GenBank	M nucl.	ATGAGTTCCTTAAAGAAGATTCTCGGTCTGAAGGGGAAAGGTAAGAAATCTAAGAAATTA	
HR	M nucl.	ATGAGTTCCTTAAAGAAGATTCTCGGTCTGAAGGGGAAAGGTAAGAAATCTAAGAAATTA	
M3	M nucl.	ATGAGTTCCTTAAAGAAGATTCTCGGTCTGAAGGGGAAAGGTAAGAAATCTAAGAAATTA	
M4	M nucl.	ATGAGTTCCTTAAAGAAGATTCTCGGTCTGAAGGGGAAAGGTAAGAAATCTAAGAAATTA	
		61	120
GenBank	M nucl.	GGGATCGCACCACCCCTTATGAAGAGGACACTAATGATGGAGTATGCTCCGAGCGCTCCA	
HR	M nucl.	GGGATCGCACCACCCCTTATGAAGAGGACACTAATGATGGAGTATGCTCCGAGCGCTCCA	
M3	M nucl.	GGGATCGCACCACCCCTTATGAAGAGGACACTAATGATGGAGTATGCTCCGAGCGCTCCA	
M4	M nucl.	GGGATCGCACCACCCCTTATGAAGAGGACACTAATGATGGAGTATGCTCCGAGCGCTCCA	
		121	180
GenBank	M nucl.	ATTGACAAATCCTATTTTGGAGTTGACGAGATGGACACTATGATCCGATCAATTAAGA	
HR	M nucl.	ATTGACAAATCCTATTTTGGAGTTGACGAGATGGACACTATGATCCGATCAATTAAGA	
M3	M nucl.	ATTGACAAATCCTATTTTGGAGTTGACGAGATGGACACTATGATCCGATCAATTAAGA	
M4	M nucl.	ATTGACAAATCCTATTTTGGAGTTGACGAGATGGACACTATGATCCGATCAATTAAGA	
		181	240
GenBank	M nucl.	TATGAGAAATCTTCTTTACAGTGAAAATGACGGTTAGATCTAATCGTCCGTTTCAGAACA	
HR	M nucl.	TATGAGAAATCTTCTTTACAGTGAAAATGACGGTTAGATCTAATCGTCCGTTTCAGAACA	
M3	M nucl.	TATGAGAAATCTTCTTTACAGTGAAAATGACGGTTAGATCTAATCGTCCGTTTCAGAACA	
M4	M nucl.	TATGAGAAATCTTCTTTACAGTGAAAATGACGGTTAGATCTAATCGTCCGTTTCAGAACA	
		241	300
GenBank	M nucl.	TACTCAGATGTGGCAGCCGCTGTATCCCATTTGGGATCACATGTACATCGGAATGGCAGGG	
HR	M nucl.	TACTCAGATGTGGCAGCCGCTGTATCCCATTTGGGATCACATGTACATCGGAATGGCAGGG	
M3	M nucl.	TACTCAGATGTGGCAGCCGCTGTATCCCATTTGGGATCACATGTACATCGGAATGGCAGGG	
M4	M nucl.	TACTCAGATGTGGCAGCCGCTGTATCCCATTTGGGATCACATGTACATCGGAATGGCAGGG	
		301	360
GenBank	M nucl.	AAACGTCCCTTCTACAAATCTTGGCTTTTTTGGGTTCTTCTAATCTAAAGGCCACTCCA	
HR	M nucl.	AAACGTCCCTTCTACAAATCTTGGCTTTTTTGGGTTCTTCTAATCTAAAGGCCACTCCA	
M3	M nucl.	AAACGTCCCTTCTACAAATCTTGGCTTTTTTGGGTTCTTCTAATCTAAAGGCCACTCCA	
M4	M nucl.	AAACGTCCCTTCTACAAATCTTGGCTTTTTTGGGTTCTTCTAATCTAAAGGCCACTCCA	
		361	420
GenBank	M nucl.	GCGGTATTGGCAGATCAAGGTCAACCAGAGTATCACACTCACTGGAAGGCAGGGCTTAT	
HR	M nucl.	GCGGTATTGGCAGATCAAGGTCAACCAGAGTATCACACTCACTGGAAGGCAGGGCTTAT	
M3	M nucl.	GCGGTATTGGCAGATCAAGGTCAACCAGAGTATCACACTCACTGGAAGGCAGGGCTTAT	
M4	M nucl.	GCGGTATTGGCAGATCAAGGTCAACCAGAGTATCACACTCACTGGAAGGCAGGGCTTAT	
		421	480
GenBank	M nucl.	TTGCCACACAGAAATGGGGAAGACCCCTCCCATGCTCAATGTACCAGAGCACTTCAGAAGA	
HR	M nucl.	TTGCCACACAGAAATGGGGAAGACCCCTCCCATGCTCAATGTACCAGAGCACTTCAGAAGA	
M3	M nucl.	TTGCCACACAGAAATGGGGAAGACCCCTCCCATGCTCAATGTACCAGAGCACTTCAGAAGA	
M4	M nucl.	TTGCCACACAGAAATGGGGAAGACCCCTCCCATGCTCAATGTACCAGAGCACTTCAGAAGA	
		481	540
GenBank	M nucl.	CCATTCAATATAGGTCTTTACAAGGGAACGGTTGAGCTCACAATGACCATCTACGATGAT	
HR	M nucl.	CCATTCAATATAGGTCTTTACAAGGGAACGGTTGAGCTCACAATGACCATCTACGATGAT	
M3	M nucl.	CCATTCAATATAGGTCTTTACAAGGGAACGGTTGAGCTCACAATGACCATCTACGATGAT	
M4	M nucl.	CCATTCAATATAGGTCTTTACAAGGGAACGGTTGAGCTCACAATGACCATCTACGATGAT	

FIGURE 18-1

	541	600
GenBank M nucl.	GAGTCACTGGAAGCAGCTCCTATGATCTGGGATCATTTC	AATTCCTTCCAAATTTTCTGAT
HR M nucl.	GAGTCACTGGAAGCAGCTCCTATGATCTGGGATCATTTC	AATTCCTTCCAAATTTTCTGAT
M3 M nucl.	GAGTCACTGGAAGCAGCTCCTATGATCTGGGATCATTTC	AATTCCTTCCAAATTTTCTGAT
M4 M nucl.	GAGTCACTGGAAGCAGCTCCTATGATCTGGGATCATTTC	AATTCCTTCCAAATTTTCTGAT
	601	660
GenBank M nucl.	TTCAGAGAGAAGGCCTTAATGTTTGGCCTGATTGTCGAGAAAAAGGCATCTGGAGC	GTGG
HR M nucl.	TTCAGAGAGAAGGCCTTAATGTTTGGCCTGATTGTCGAGAAAAAGGCATCTGGAGC	TTGG
M3 M nucl.	TTCAGAGAGAAGGCCTTAATGTTTGGCCTGATTGTCGAGAAAAAGGCATCTGGAGC	TTGG
M4 M nucl.	TTCAGAGAGAAGGCCTTAATGTTTGGCCTGATTGTCGAGAAAAAGGCATCTGGAGC	TTGG
	661	690
GenBank M nucl.	GTCCTGGATTCTGTCAGCCACTTCAAATGA	
HR M nucl.	GTCCTGGATTCTGTCAGCCACTTCAAATGA	
M3 M nucl.	GTCCTGGATTCTGTCAGCCACTTCAAATGA	
M4 M nucl.	GTCCTGGATTCTGTCAGCCACTTCAAATGA	

FIGURE 18-2

		1		60
GenBank	M a . a .	MSSLKKILGLKGKGKSKKLGIAPPPYEEDT	SMEYAPSAPIDKSYFGVDEMDT	YDPNQLR
	HR	M a . a .	MSSLKKILGLKGKGKSKKLGIAPPPYEEDTNMEYAPSAPIDKSYFGVDEMDTHDPHQLR	
	M4	M a . a .	MSSLKKILGLKGKGKSKKLGIAPPPYEEDTNMEYAPSAPIDKSYFGVDEMDTHDPHQLR	
	M3	M a . a .	MSSLKKILGLKGKGKSKKLGIAPPPYEEDTNMEYAPSAPIDKSYFGVDE	RDTHDPHQLR
		61		120
GenBank	M a . a .	YEKFFFTVKMTVRSNRPFRITYSDVAAAVSHWDHMYIGMAGKRPFYKILAFLGSSNLKATP		
	HR	M a . a .	YEKFFFTVKMTVRSNRPFRITYSDVAAAVSHWDHMYIGMAGKRPFYKILAFLGSSNLKATP	
	M4	M a . a .	YEKFFFTVKMTVRSNRPFRITYSDVAAAVSHWDHMYIGMAGKRPFYKILAFLGSSNLKATP	
	M3	M a . a .	YEKFFFTVKMTVRSNRPFRITYSDVAAAVSHWDHMYIGMAGKRPFYKILAFLGSSNLKATP	
		121		180
GenBank	M a . a .	AVLADQGGQPEYH	THCEGRAYLPHRMGKTPPMLNVPEHFRRPFNIGLYKGT	IELTMTIYDD
	HR	M a . a .	AVLADQGGQPEYHAHCEGRAYLPHRMGKTPPMLNVPEHFRRPFNIGLYKGTVELTMTIYDD	
	M4	M a . a .	AVLADQGGQPEYHAHCEGRAYLPHRMGKTPPMLNVPEHFRRPFNIGLYKGTVELTMTIYDD	
	M3	M a . a .	AVLADQGGQPEYHAHCEGRAYLPHRMGKTPPMLNVPEHFRRPFNIGLYKGTVELTMTIYDD	
		181		230
GenBank	M a . a .	ESLEAAPMIWDHFNSSKFSDFREKALMFGLIVEKKASGAWVLD	S	SHFK.
	HR	M a . a .	ESLEAAPMIWDHFNSSKFSDFREKALMFGLIVEKKASGAWVLD	SVSHFK.
	M4	M a . a .	ESLEAAPMIWDHFNSSKFSDFREKALMFGLIVEKKASGAWVLD	SVSHFK.
	M3	M a . a .	ESLEAAPMIWDHFNSSKFSDFREKALMFGLIVEKKASGAWVLD	SVSHFK.

FIGURE 19

		1		60
GenBank	G nucl.	ATGAAGTGCCTTTTGTACTTAGC	TTTTTATTCATGGGGTGAATTGCAAGTTCACCATA	
HR	G nucl.	ATGAAGTGCCTTTTGTACTTAGCTTTTTTATTCATCGGGGTGAATTGCAAGTTCACCATA		
M2	G nucl.	.....		
M3	G nucl.	ATGAAGTGCCTTTTGTACTTAGCTTTTTTATTCATCGGGGTGAATTGCAAGTTCACCATA		
M4	G nucl.	ATGAAGTGCCTTTTGTACTTAGCTTTTTTATTCATCGGGGTGAATTGCAAGTTCACCATA		
		61		120
GenBank	G nucl.	GTTTTTCCAACAACCAAAAAGGAACTGGAAAAATGTTCTTC	AATTACCATTATTGC	
HR	G nucl.	GTTTTTCCATACAACCAAAAAGGAACTGGAAAAATGTTCTTCCAATTACCATTATTGC		
M2	G nucl.	.....		
M3	G nucl.	GTTTTTCCATACAACCAAAAAGGAACTGGAAAAATGTTCTTCCAATTACCATTATTGC		
M4	G nucl.	GTTTTTCCATACAACCAAAAAGGAACTGGAAAAATGTTCTTCCAATTACCATTATTGC		
		121		180
GenBank	G nucl.	CCGTCAAGCTCAGATTTAAATTGGCATAATGACTTAATAGGCACAGCC	TACAAGTCAAA	
HR	G nucl.	CCGTCAAGCTCAGATTTAAATTGGCATAATGACTTAATAGGCACAGCCTTACAAGTCAAA		
M2	G nucl.	.....		
M3	G nucl.	CCGTCAAGCTCAGATTTAAATTGGCATAATGACTTAATAGGCACAGCCTTACAAGTCAAA		
M4	G nucl.	CCGTCAAGCTCAGATTTAAATTGGCATAATGACTTAATAGGCACAGCCTTACAAGTCAAA		
		181		240
GenBank	G nucl.	ATGCCCAAGAGTCACAAGGCTATTCAAGCAGACGGTTGGATGTGTCATGCTTCCAAATGG		
HR	G nucl.	ATGCCCAAGAGTCACAAGGCTATTCAAGCAGACGGTTGGATGTGTCATGCTTCCAAATGG		
M2	G nucl.	.....		
M3	G nucl.	ATGCCCAAGAGTCACAAGGCTATTCAAGCAGACGGTTGGATGTGTCATGCTTCCAAATGG		
M4	G nucl.	ATGCCCAAGAGTCACAAGGCTATTCAAGCAGACGGTTGGATGTGTCATGCTTCCAAATGG		
		241		300
GenBank	G nucl.	GTCACTACTTGTGATTTCCGCTGGTACGGACCGAAGTATATAACACA	TCCATCCGATCC	
HR	G nucl.	GTCACTACTTGTGATTTCCGCTGGTACGGACCGAAGTATATAACACATTCATCCGATCC		
M2	G nucl.	.....		
M3	G nucl.	GTCACTACTTGTGATTTCCGCTGGTACGGACCGAAGTATATAACACATTCATCCGATCC		
M4	G nucl.	GTCACTACTTGTGATTTCCGCTGGTACGGACCGAAGTATATAACACATTCATCCGATCC		
		301		360
GenBank	G nucl.	TTCACTCCATCTGTAGAACAATGCAAGGAAAGCATTGAACAAACGAAACAAGGAACCTGG		
HR	G nucl.	TTCACTCCATCTGTAGAACAATGCAAGGAAAGCATTGAACAAACGAAACAAGGAACCTGG		
M2	G nucl.	.....		
M3	G nucl.	TTCACTCCATCTGTAGAACAATGCAAGGAAAGCATTGAACAAACGAAACAAGGAACCTGG		
M4	G nucl.	TTCACTCCATCTGTAGAACAATGCAAGGAAAGCATTGAACAAACGAAACAAGGAACCTGG		
		361		420
GenBank	G nucl.	CTGAATCCAGGCTTCCCTCCTCAAAGTTGTGGATATGCAACTGTGACGGATGCT	GAAGCA	
HR	G nucl.	CTGAATCCAGGCTTCCCTCCTCAAAGTTGTGGATATGCAACTGTGACGGATGCTGAAGCA		
M2	G nucl.	.....		
M3	G nucl.	CTGAATCCAGGCTTCCCTCCTCAAAGTTGTGGATATGCAACTGTGACGGATGCTGAAGCA		
M4	G nucl.	CTGAATCCAGGCTTCCCTCCTCAAAGTTGTGGATATGCAACTGTGACGGATGCTGAAGCA		
		421		480
GenBank	G nucl.	GCGATTGTCCAGGTGACTCCTCACCATGTGCT	GTTGATGAATACACAGGAGAATGGGTT	
HR	G nucl.	GCGATTGTCCAGGTGACTCCTCACCATGTGCTTGTGATGAATACACAGGAGAATGGGTT		
M2	G nucl.	.....		
M3	G nucl.	GCGATTGTCCAGGTGACTCCTCACCATGTGCTTGTGATGAATACACAGGAGAATGGGTT		
M4	G nucl.	GCGATTGTCCAGGTGACTCCTCACCATGTGCTTGTGATGAATACACAGGAGAATGGGTT		

FIGURE 20-1

		481	540
GenBank	G nucl.	GATTCACAGTTCATCAACGGAAAATGCAGCAATACATATGCCCCACTGTCCATAACTCC	
	HR G nucl.	GATTCACAGTTCATCAACGGAAAATGCAGCAATGACATATGCCCCACTGTCCATAACTCC	
	M2 G nucl.	.....	
	M3 G nucl.	GATTCACAGTTCATCAACGGAAAATGCAGCAATGACATATGCCCCACTGTCCATAACTCC	
	M4 G nucl.	GATTCACAGTTCATCAACGGAAAATGCAGCAATGACATATGCCCCACTGTCCATAACTCC	
		541	600
GenBank	G nucl.	ACAACCTGGCATTCCGACTATAAGGTCAAAGGGCTATGTGATTCTAACCTCATTTCATG	
	HR G nucl.	ACAACCTGGCATTCCGACTATAAGGTCAAAGGGCTATGTGATTCTAACCTCATTTCATG	
	M2 G nucl.	.....	
	M3 G nucl.	ACAACCTGGCATTCCGACTATAAGGTCAAAGGGCTATGTGATTCTAACCTCATTTCATG	
	M4 G nucl.	ACAACCTGGCATTCCGACTATAAGGTCAAAGGGCTATGTGATTCTAACCTCATTTCATG	
		601	660
GenBank	G nucl.	GACATCACCTTCTTCTCAGAGGACGGAGAGCTATCATCCCTAGGAAAGGAGGGCACAGGG	
	HR G nucl.	GACATCACCTTCTTCTCAGAGGACGGAGAGCTATCATCCCTAGGAAAGGAGGGCACAGGG	
	M2 G nucl.	.....	
	M3 G nucl.	GACATCACCTTCTTCTCAGAGGACGGAGAGCTATCATCCCTAGGAAAGGAGGGCACAGGG	
	M4 G nucl.	GACATCACCTTCTTCTCAGAGGACGGAGAGCTATCATCCCTAGGAAAGGAGGGCACAGGG	
		661	720
GenBank	G nucl.	TTCAGAAGTAACTACTTTTGCTTATGAACTGGAGCAAGGCCTGCAAAATGCAGTACTGC	
	HR G nucl.	TTCAGAAGTAACTACTTTTGCTTATGAACTGGAGACAAGGCCTGCAAAATGCAGTACTGC	
	M2 G nucl.	.....	
	M3 G nucl.	TTCAGAAGTAACTACTTTTGCTTATGAACTGGAGACAAGGCCTGCAAAATGCAGTACTGC	
	M4 G nucl.	TTCAGAAGTAACTACTTTTGCTTATGAACTGGAGACAAGGCCTGCAAAATGCAGTACTGC	
		721	780
GenBank	G nucl.	AAGCGTTGGGGAGTCAGACTCCCATCAGGTGTCTGGTTCGAGATGGCTGATAAGGATCTC	
	HR G nucl.	AAGCGTTGGGGAGTCAGACTCCCATCAGGTGTCTGGTTCGAGATGGCTGATAAGGATCTC	
	M2 G nucl.	.....	
	M3 G nucl.	AAGCGTTGGGGAGTCAGACTCCCATCAGGTGTCTGGTTCGAGATGGCTGATAAGGATCTC	
	M4 G nucl.	AAGCGTTGGGGAGTCAGACTCCCATCAGGTGTCTGGTTCGATGGCTGATAAGGATCTC	
		781	840
GenBank	G nucl.	TTTGCTGCAGCCAGATTCCCTGAATGCCCAGAAGGGTCAAGTATCTCTGCTCCATCTCAG	
	HR G nucl.	TTTGCTGCAGCCAGATTCCCTGAATGCCCAGAAGGGTCAAGTATCTCTGCTCCATCTCAG	
	M2 G nucl.	.....CCATCTCAG	
	M3 G nucl.	TTTGCTGCAGCCAGATTCCCTGAATGCCCAGAAGGGTCAAGTATCTCTGCTCCATCTCAG	
	M4 G nucl.	TTTGCTGCAGCCAGATTCCCTGAATGCCCAGAAGGGTCAAGTATCTCTGCTCCATCTCAG	
		841	900
GenBank	G nucl.	ACCTCAGTGGATGTAAGTCTATTTCAGGACGTTGAGAGGATCTTGATTATTCCCTCTGC	
	HR G nucl.	ACCTCAGTGGATGTAAGTCTATTTCAGGACGTTGAGAGGATCTTG.....	
	M2 G nucl.	ACCTCAGTGGATGTAAGTCTATTTCAGGACGTTGAGAGGATCTTGATTATTCCCTCTGC	
	M3 G nucl.	ACCTCAGTGGATGTAAGTCTATTTCAGGACGTTGAGAGGATCTTGATTATTCCCTCTGC	
	M4 G nucl.	ACCTCAGTGGATGTAAGTCTATTTCAGGACGTTGAGAGGATCT.....	

FIGURE 20-2

		901		960
GenBank	G nucl.	CAAGAAACCTGGAGCAAAATCAGAGCGGGTCTTCC	ATCTCTCCAGTGGATCTCAGCTAT	
	HR G nucl.	.....	.....	
	M2 G nucl.	CAAGAAACCTGGAGCAAAATCAGAGCGGGTCTTCC	ATCTCTCCAGTGGATCTCAGCTAT	
	M3 G nucl.	CAAGAAACCTGGAGCAAAATCAGAGCGGGTCTTCC	ATCTCTCCAGTGGATCTCAGCTAT	
	M4 G nucl.	.....	.....	
		961		1020
GenBank	G nucl.	CTTGCTCCTAAAAACCCAGGAACCGGTCTTGCTTT	CACCATAATCAATGGTACCCTAAAA	
	HR G nucl.	.....	.....	
	M2 G nucl.	CTTGCTCCTAAAAACCCAGGAACCGGTCTTGCTTT	CACCATAATCAATGGTACCCTAAAA	
	M3 G nucl.	CTTGCTCCTAAAAACCCAGGAACCGGTCTTGCTTT	CACCATAATCAATGGTACCCTAAAA	
	M4 G nucl.	.....	.....	
		1021		1080
GenBank	G nucl.	TACTTTGAGACCAGATACATCAGAGTCGATATTGCTGCT	TCCAATCCTCTCAAGAATGGTC	
	HR G nucl.	.....	.....	
	M2 G nucl.	TACTTTGAGACCAGATACATCAGAGTCGATATTGCTGCT	TCCAATCCTCTCAAGAATGGTC	
	M3 G nucl.	TACTTTGAGACCAGATACATCAGAGTCGATATTGCTGCT	TCCAATCCTCTCAAGAATGGTC	
	M4 G nucl.	TACTTTGAGACCAGATACATCAGAGTCGATATTGCTGCT	TCCAATCCTCTCAAGAATGGTC	
		1081		1140
GenBank	G nucl.	GGAATGATCAGTGGAACCTACCACAGAAAGGGAAC	TGTGGGATGACTGGGC	CCATATGAA
	HR G nucl.	.....	.....	
	M2 G nucl.	GGAATGATCAGTGGAACCTACCACAGAAAGGGAAC	TGTGGGATGACTGGGC	TCCATATGAA
	M3 G nucl.	GGAATGATCAGTGGAACCTACCACAGAAAGGGAAC	TGTGGGATGACTGGGC	TCCATATGAA
	M4 G nucl.	GGAATGATCAGTGGAACCTACCACAGAAAGGGAAC	TGTGGGATGACTGGGC	TCCATATGAA
		1141		1200
GenBank	G nucl.	GACGTGGAAATTGGACCCAATGGAGTTCTGAGGACCAGTT	CAGGATATAAGTTTCCTTTA	
	HR G nucl.	.....	.....	
	M2 G nucl.	GACGTGGAAATTGGACCCAATGGAGTTCTGAGGACCAGTT	CAGGATATAAGTTTCCTTTA	
	M3 G nucl.	GACGTGGAAATTGGACCCAATGGAGTTCTGAGGACCAGTT	CAGGATATAAGTTTCCTTTA	
	M4 G nucl.	GACGTGGAAATTGGACCCAATGGAGTTCTGAGGACCAGTT	CAGGATATAAGTTTCCTTTA	
		1201		1260
GenBank	G nucl.	TATGATGATTGGACATGGTATGTTGGACTCCGATCTTCATCT	TAGCTCAAAGGCTCAGGTG	
	HR G nucl.	.....	.....	
	M2 G nucl.	TATATGATTGGACATGGTATGTTGGACTCCGATCTTCATCT	TAGCTCAAAGGCTCAGGTG	
	M3 G nucl.	TATATGATTGGACATGGTATGTTGGACTCCGATCTTCATCT	TAGCTCAAAGGCTCAGGTG	
	M4 G nucl.	TATATGATTGGACATGGTATGTTGGACTCCGATCTTCATCT	TAGCTCAAAGGCTCAGGTG	
		1261		1320
GenBank	G nucl.	TTGAACATCCTCACATTCAAGACGCTGCTTCGCA	CTTCCTGATGATGAGACTTTATTT	
	HR G nucl.	.....	.....	
	M2 G nucl.	TTTGAACATCCTCACATTCAAGACGCTGCTTCGCA	CTTCCTGATGATGAGACTTTATTT	
	M3 G nucl.	TTTGAACATCCTCACATTCAAGACGCTGCTTCGCA	CTTCCTGATGATGAGACTTTATTT	
	M4 G nucl.	TTTGAACATCCTCACATTCAAGACGCTGCTTCGCA	CTTCCTGATGATGAGACTTTATTT	

FIGURE 20-3

		1321		1380
GenBank	G	nucl.	TTTGGTGATACTGGGCTATCCAAAAATCCAATCGAGCTTGTAGAAGGTTGGTTCAGTAGT	
	HR	G	nucl.	.....
	M2	G	nucl.	TTTGGTGATACTGGGCTATCCAAAAATCCAATCGAGTTTGTAGAAGGTTGGTTCAGTAGT
	M3	G	nucl.	TTTGGTGATACTGGGCTATCCAAAAATCCAATCGAGTTTGTAGAAGGTTGGTTCAGTAGT
	M4	G	nucl.	TTTGGTGATACTGGGCTATCCAAAAATCCAATCGAGTTTGTAGAAGGTTGGTTCAGTAGT
		1381		1440
GenBank	G	nucl.	TGGAAAGCTCTATTGCCTCTTTTTTCTTTATCATAGGGTTAATCATTGGACTATTCTTG	
	HR	G	nucl.	.....
	M2	G	nucl.	TGGAAGAGCTCTATTGCCTCTTTTTTCTTTATCATAGGGTTAATCATTGGACTATTCTTG
	M3	G	nucl.	TGGAAGAGCTCTATTGCCTCTTTTTTCTTTATCATAGGGTTAATCATTGGACTATTCTTG
	M4	G	nucl.	TGGAAGAGCTCTATTGCCTCTTTTTTCTTTATCATAGGGTTAATCATTGGACTATTCTTG
		1441		1500
GenBank	G	nucl.	GTTCTCCGAGTTGGTATCCATCTTTGCATTAAATTAAAGCACACCAAGAAAAGACAGATT	
	HR	G	nucl.	.....
	M2	G	nucl.	GTTCTCCGAGTTGGTATTTATCTTTGCATTAAATTAAAGCACACCAAGAAAAGACAGATT
	M3	G	nucl.	GTTCTCCGAGTTGGTATTTATCTTTGCATTAAATTAAAGCACACCAAGAAAAGACAGATT
	M4	G	nucl.	GTTCTCCGAGTTGGTATTTATCTTTGCATTAAATTAAAGCACACCAAGAAAAGACAGATT
		1501		1536
GenBank	G	nucl.	TATACAGACATAGAGATGAACCGACTTGGAAAGTAA	
	HR	G	nucl.	.....
	M2	G	nucl.	TATACAGACATAGAGATGAACCGACTTGGGAAGTAA
	M3	G	nucl.	TATACAGACATAGAGATGAACCGACTTGGGAAGTAA
	M4	G	nucl.	TATACAGACATAGAGATGAACCGACTTGGGAAGTAA

FIGURE 20-4

		1		60
GenBank	G a. a.	MKCLLYLAFLFIGVNCKFTIVFP	NQGNWKNVPSNYHYCPSSSDLNWNHNDLIGTA	QVK
HR	G a. a.	MKCLLYLAFLFIGVNCKFTIVFP	YNQGNWKNVPSNYHYCPSSSDLNWNHNDLIGTA	QVK
M2	G a. a.	.....	.....	.....
M3	G a. a.	MKCLLYLAFLFIGVNCKFTIVFP	YNQGNWKNVPSNYHYCPSSSDLNWNHNDLIGTA	QVK
M4	G a. a.	MKCLLYLAFLFIGVNCKFTIVFP	YNQGNWKNVPSNYHYCPSSSDLNWNHNDLIGTA	QVK
		61		120
GenBank	G a. a.	MPKSHKAIQADGWMCHASKWVTTCDFRWYGPKYIT	SIRSFTPSVEQCKESIEQTKQGTW	
HR	G a. a.	MPKSHKAIQADGWMCHASKWVTTCDFRWYGPKYITHS	SIRSFTPSVEQCKESIEQTKQGTW	
M2	G a. a.	.....	.....	
M3	G a. a.	MPKSHKAIQADGWMCHASKWVTTCDFRWYGPKYITHS	SIRSFTPSVEQCKESIEQTKQGTW	
M4	G a. a.	MPKSHKAIQADGWMCHASKWVTTCDFRWYGPKYITHS	SIRSFTPSVEQCKESIEQTKQGTW	
		121		180
GenBank	G a. a.	LNPGFPPQSCGYATVTDAAE	IVQVTPHHVLVDEYTG EWVDSQFINGKCSN	ICPTVHNS
HR	G a. a.	LNPGFPPQSCGYATVTDAAE	AAIVQVTPHHVLVDEYTG EWVDSQFINGKCSN	NDICPTVHNS
M2	G a. a.	.....	.....	.....
M3	G a. a.	LNPGFPPQSCGYATVTDAAE	AAIVQVTPHHVLVDEYTG EWVDSQFINGKCSN	NDICPTVHNS
M4	G a. a.	LNPGFPPQSCGYATVTDAAE	AAIVQVTPHHVLVDEYTG EWVDSQFINGKCSN	NDICPTVHNS
		181		240
GenBank	G a. a.	TTWHSYKVKGLCDSNLSMDITFFSEDGELSSLGKEGTGFRSNYFAYETG	KACKMQYC	
HR	G a. a.	TTWHSYKVKGLCDSNLSMDITFFSEDGELSSLGKEGTGFRSNYFAYETG	DKACKMQYC	
M2	G a. a.	.....	.....	
M3	G a. a.	TTWHSYKVKGLCDSNLSMDITFFSEDGELSSLGKEGTGFRSNYFAYETG	DKACKMQYC	
M4	G a. a.	TTWHSYKVKGLCDSNLSMDITFFSEDGELSSLGKEGTGFRSNYFAYETG	DKACKMQYC	
		241		300
GenBank	G a. a.	KHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERILDYSLC		
HR	G a. a.	KHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL	.....	
M2	G a. a.	.....	PSQTSVDVSLIQDVERILDYSLC	
M3	G a. a.	KHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERILDYSLC		
M4	G a. a.	KHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL	.....	
		301		360
GenBank	G a. a.	QETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVDIAAPILSRMV		
HR	G a. a.	.....	.....	
M2	G a. a.	QETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVDIAAPILSRMV		
M3	G a. a.	QETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVDIAAPILSRMV		
M4	G a. a.	.....	YFETRYIRVDIAAPILSRMV	
		361		420
GenBank	G a. a.	GMISGTTTERELWDDWAPYEDVEIGPNGVLR	TSSGYKFPLYMIGHGMLDSDLHLSSKAQV	
HR	G a. a.	.....	.....	
M2	G a. a.	GMISGTTTERELWDDWAPYEDVEIGPNGVLR	TSSGYKFPLYMIGHGMLDSDLHLSSKAQV	
M3	G a. a.	GMISGTTTERELWDDWAPYEDVEIGPNGVLR	TSSGYKFPLYMIGHGMLDSDLHLSSKAQV	
M4	G a. a.	GMISGTTTERELWDDWAPYEDVEIGPNGVLR	TSSGYKFPLYMIGHGMLDSDLHLSSKAQV	

FIGURE 21-1



		421		480
GenBank	G a.a.	FEHPHIQDAASQLPDDE	SLFFGDTGLSKNPIE	VEGWFSSWKSSIASFFFIIGLIIGLFL
	HR	G a.a.	.....	.....
	M2	G a.a.	FEHPHIQDAASQLPDDET	LFFGDTGLSKNPIEFVEGWFSSWKSSIASFFFIIGLIIGLFL
	M3	G a.a.	FEHPHIQDA	XALPDDET
	M4	G a.a.	FEHPHIQDAASQLPDDET	LFFGDTGLSKNPIEFVEGWFSSWKSSIASFFFIIGLIIGLFL
		481		512
GenBank	G a.a.	VLRVGI	LCIKLKHTKKRQIYTD	DIEMNRLGK
	HR	G a.a.	.....	.....
	M2	G a.a.	VLRVGIYLCIKLKHTKKRQIYTD	DIEMNRLGK
	M3	G a.a.	VLRVGIYLCIKLKHTKKRQIYTD	DIEMNRLGK
	M4	G a.a.	VLRVGIYLCIKLKHTKKRQIYTD	DIEMNRLGK

FIGURE 21-2

GenBank L nucl.	1	60
HR L nucl.	ATGGAAGTCCACGATTTTGAGACCGACGAGTTCAATGATTTCAATGAAGATGACTATGCC	
M2 L nucl.	.....	
M4 L nucl.	ATGGAAGTCCACGATTTTGAGACCGACGAGTTCAATGATTTCAATGAAGATGACTATGCC	
GenBank L nucl.	61	120
HR L nucl.	ACAAGAGAATTCTGAATCCCGATGAGCGCATGACGTACTTGAATCATGCTGATTACAAT	
M2 L nucl.	.....	
M4 L nucl.	ACAAGAGAATTCTGAATCCCGATGAGCGCATGACGTACTTGAATCATGCTGATTACAAT	
GenBank L nucl.	121	180
HR L nucl.	TTGAATTCTCTCTAATTAGTGATGATATTGACAATTTGATCAGGAAATTCAATTCTCTT	
M2 L nucl.	.....	
M4 L nucl.	TTGAATTCTCTCTAATTAGTGATGATATTGACAATTTGATCAGGAAATTCAATTCTCTT	
GenBank L nucl.	181	240
HR L nucl.	CCGATTCCCTCGATGTGGGATAGTAAGAACTGGGATGGAGTTCTTGAGATGTTAACATCA	
M2 L nucl.	.....	
M4 L nucl.	CCGATTCCCTCGATGTGGGATAGTAAGAACTGGGATGGAGTTCTTGAGATGTTAACATCA	
GenBank L nucl.	241	300
HR L nucl.	TGTCAGCCAATCCCATCTCAACATCTCAGATGCATAAATGGATGGGAAGTTGGTTAATG	
M2 L nucl.	.....	
M4 L nucl.	TGTCAGCCAATCCCATCTCAACATCTCAGATGCATAAATGGATGGGAAGTTGGTTAATG	
GenBank L nucl.	301	360
HR L nucl.	TCTGATAATCATGATGCCAGTCAAGGGTATAGTTTTTTTACATGAAGTGGACAAAGAGGCA	
M2 L nucl.	.....	
M4 L nucl.	TCTGATAATCATGATGCCAGTCAAGGGTATAGTTTTTTTACATGAAGTGGACAAAGAGGCA	
GenBank L nucl.	361	420
HR L nucl.	GAAATAACATTTGACGTGGTGGAGACCTTCATCCGCGGCTGGGGCAACAAACCAATTGAA	
M2 L nucl.	.....	
M4 L nucl.	GAAATAACATTTGACGTGGTGGAGACCTTCATCCGCGGCTGGGGCAACAAACCAATTGAA	
GenBank L nucl.	421	480
HR L nucl.	TACATCAAAAAGGAAAGATGGACTGACTCATTCAAAATTCTCGCTTATTTGTGTCAAAAG	
M2 L nucl.	.....	
M4 L nucl.	TACATCAAAAAGGAAAGATGGACTGACTCATTCAAAATTCTCGCTTATTTGTGTCAAAAG	
GenBank L nucl.	481	540
HR L nucl.	TTTTTGGACTTACACAAGTTGACATTAATCTTAAATGCTGTCTCTGAGGTGGAATTGCTC	
M2 L nucl.	.....	
M4 L nucl.	TTTTTGGACTTACACAAGTTGACATTAATCTTAAATGCTGTCTCTGAGGTGGAATTGCTC	

FIGURE 22-1

GenBank L nucl.	541	600
HR L nucl.	AACTTGCGAGGACTTTCAAAGGCAAAGTCAGAAGAAGTTCTCATGGAACGAACATATGC	
M2 L nucl.	.....	
M4 L nucl.	AACTTGCGAGGACTTTCAAAGGCAAAGTCAGAAGAAGTTCTCATGGAACGAACATATGC	
GenBank L nucl.	601	660
HR L nucl.	AGGATTAGGGTTCCCAGCTTGGGTCCTACTTTTATTTTCAAGGATGGGCTTACTTCAAG	
M2 L nucl.	.....	
M4 L nucl.	AGGCTTAGGGTTCCCAGCTTGGGTCCTACTTTTATTTTCAAGGATGGGCTTACTTCAAG	
GenBank L nucl.	661	720
HR L nucl.	AACTTGATATTCTAATGGACCGAAACTTTCTGTTAATGGTCAAAGATGTGATTATAGGG	
M2 L nucl.	.....	
M4 L nucl.	AACTTGATATTCTAATGGACCGAAACTTTCTGTTAATGGTCAAAGATGTGATTATAGGG	
GenBank L nucl.	721	780
HR L nucl.	AGGATGCAAACGGTGCTATCCATGGTATGTAGAATAGACAACCTGTTCTCAGAGCAAGAC	
M2 L nucl.	.....	
M4 L nucl.	AGGATGCAAACGGTGCTATCCATGGTATGTAGAATAGACAACCTGTTCTCAGAGCAAGAC	
GenBank L nucl.	781	840
HR L nucl.	ATCTTCTCCCTTCTAAATATCTACAGAATTGGAGATAAAATTGTGGAGAGGCAGGGAAAT	
M2 L nucl.	.....	
M4 L nucl.	ATCTTCTCCCTTCTAAATATCTACAGAATTGGAGATAAAATTGTGGAGAGGCAGGGAAAT	
GenBank L nucl.	841	900
HR L nucl.	TTTCTTATGACTTGATTAAAAATGGTGGAACCGATATGCAACTTGAAGCTGATGAAATTA	
M2 L nucl.	.....	
M4 L nucl.	TTTCTTATGACTTGATTAAAAATGGTGGAACCGATATGCAACTTGAAGCTGATGAAATTA	
GenBank L nucl.	901	960
HR L nucl.	GCAAGAGAATCAAGGCCTTTAGTCCCACAATTCCCTCATTTTGAAAATCATATCAAGACT	
M2 L nucl.	.....	
M4 L nucl.	GCAAGAGAATCAAGGCCTTTAGTCCCACAATTCCCTCATTTTGAAAATCATATCAAGACT	
GenBank L nucl.	961	1020
HR L nucl.	TCTGTTGATGAAGGGGCAAAAATTGACCGAGGTATAAGATTCCCTCCATGATCAGATAATG	
M2 L nucl.	.....	
M4 L nucl.	TCTGTTGATGAAGGGGCAAAAATTGACCGAGGTATAAGATTCCCTCCATGATCAGATAATG	

FIGURE 22-2

GenBank L nucl.	1021	1080
HR L nucl.	AGTGTGAAAACAGTGGATCTCACACTGGTGATTTATGGATCGTTCAGACATTGGGGTCAT	
M2 L nucl.	.....CATTGGGGTCAT	
M4 L nucl.	AGTGTGAAAACAGTGGATCTCACACTGGTGATTTATGGATCGTTCAGACATTGGGGTCAT	
GenBank L nucl.	1081	1140
HR L nucl.	CCTTTTATAGATTATTACCTGGACTAGAAAAATTACATTCCCAAGTAACCATGAAGAAA	
M2 L nucl.	CCTTTTATAGATTATTACGCTGGCTAGAAAAATTACATTCCCAAGTACCATGAAGAAA	
M4 L nucl.	CCTTTTATAGATTATTACGCTGGACTAGAAAAATTACATTCCCAAGTAACCATGAAGAAA	
GenBank L nucl.	1141	1200
HR L nucl.	GATATTGATGTGTCATATGCAAAAGCACCTGCAAGTGATTTAGCTCGGATTGTTCTATTT	
M2 L nucl.	GATATTGATGTGTCATATGCTAAAGCACCTGCAAGTGATTTAGCTCGGATTGTTCTATTT	
M4 L nucl.	GATATTGATGTGTCATATGCAAAAGCACCTGCAAGTGATTTAGCTCGGATTGTTCTATTT	
GenBank L nucl.	1201	1260
HR L nucl.	CAACAGTTCAATGATCATATAAAAGTGGTTCGTGAATGGAGACTTGCTCCCTCATGATCAT	
M2 L nucl.	CAACAGTTCAATGATCATATAAAAGTGGTTCGTGAATGGAGACTTGCTCCCTCATGATCAT	
M4 L nucl.	CAACAGTTCAATGATCATATAAAAGTGGTTCGTGAATGGAGACTTGCTCCCTCATGATCAT	
GenBank L nucl.	1261	1320
HR L nucl.	CCCTTTAAAAGTCATGTTAAAGAAAATACATGGCCACAGCTGCTCAAGTTCAAGATTTT	
M2 L nucl.	CCCTTTAAAAGTCATGTTAAAGAAAATACATGGCCACAGCTGCTCAAGTTCAAGATTTT	
M4 L nucl.	CCCTTTAAAAGTCATGTTAAAGAAAATACATGGCCACAGCTGCTCAAGTTCAAGATTTT	
GenBank L nucl.	1321	1380
HR L nucl.	GGAGATAAATGGCATGAACTCCGCTGATTAAATGTTTGAATACCCGACTTACTAGAC	
M2 L nucl.	GGAGATAAATGGCATGAACTCCGCTGATTAAATGTTTGAATACCCGACTTACTAGAC	
M4 L nucl.	GGAGATAAATGGCATGAACTCCGCTGATTAAATGTTTGAATACCCGACTTACTAGAC	
GenBank L nucl.	1381	1440
HR L nucl.	CCATCGATAATATACTCTGACAAAAGTCATTCAATGAATAGGTCAGAGGTGTTGAAACAT	
M2 L nucl.	CCATCGATAATATACTCTGACAAAAGTCATTCAATGAATAGGTCAGAGGTGTTGAAACAT	
M4 L nucl.	CCATCGATAATATACTCTGACAAAAGTCATTCAATGAATAGGTCAGAGGTGTTGAAACAT	
GenBank L nucl.	1441	1500
HR L nucl.	GTCCGAATGAATCCGAACACTCCTATCCCTAGTAAAAAGGTGTTGCAGACTATGTTGGAC	
M2 L nucl.	GTCCGAATGAATCCGAACACTCCTATCCCTAGTAAAAAGGTGTTGCAGACTATGTTGGAC	
M4 L nucl.	GTCCGAATGAATCCGAACACTCCTATCCCTAGTAAAAAGGTGTTGCAGACTATGTTGGAC	

FIGURE 22-3

GenBank L nucl.	1501	1560
HR L nucl.	ACAAAGGCTACCAATTGGAAAGAATTTCTTAAAGAGATTGATGAGAAGGGCTTAGATGAT	
M2 L nucl.	ACAAAGGCTACCAATTGGAAAGAATTTCTTAAAGAGATTGATGAGAAGGGCTTAGATGAT	
M4 L nucl.	ACAAAGGCTACCAATTGGAAAGAATTTCTTAAAGAGATTGATGAGAAGGGCTTAGATGAT	
GenBank L nucl.	1561	1620
HR L nucl.	GATGATCTAATTATTGGTCTTAAAGGAAAGGAGAGGGAACTGAAGTTGGCAGGTAGATTT	
M2 L nucl.	GATGATCTAATTATTGGTCTTAAAGGAAAGGAGAGGGAACTGAAGTTGGCAGGTAGATTT	
M4 L nucl.	GATGATCTAATTATTGGTCTTAAAGGAAAGGAGAGGGAACTGAAGTTGGCAGGTAGATTT	
GenBank L nucl.	1621	1680
HR L nucl.	TTCTCCCTAATGTCTTGGAATTTGCGAGAATACTTTGTAATTACCGAATATTTGATAAAG	
M2 L nucl.	TTCTCCCTAATGTCTTGGAATTTGCGAGAATACTTTGTAATTACCGAATATTTGATAAAG	
M4 L nucl.	TTCTCCCTAATGTCTTGGAATTTGCGAGAATACTTTGTAATTACCGAATATTTGATAAAG	
GenBank L nucl.	1681	1740
HR L nucl.	ACTCATTTTCGTCCCTATGTTTAAAGGCCTGACAATGGCGGACGATCTAACTGCAGTCATT	
M2 L nucl.	ACTCATTTTCGTCCCTATGTTTAAAGGCCTGACAATGGCGGACGATCTAACTGCAGTCATT	
M4 L nucl.	ACTCATTTTCGTCCCTATGTTTAAAGGCCTGACAATGGCGGACGATCTAACTGCAGTCATT	
GenBank L nucl.	1741	1800
HR L nucl.	AAAAAGATGTTAGATTCCCTCATCCGGCCAAGGATTGAAGTCATATGAGGCAATTTGCATA	
M2 L nucl.	AAAAAGATGTTAGATTCCCTCATCCGGCCAAGGATTGAAGTCATATGAGGCAATTTGCATA	
M4 L nucl.	AAAAAGATGTTAGATTCCCTCATCCGGCCAAGGATTGAAGTCATATGAGGCAATTTGCATA	
GenBank L nucl.	1801	1860
HR L nucl.	GCCAATCACATTGATTACGAAAAATGGAATAACCACCAAAGGAAGTTATCAAACGGCCCCA	
M2 L nucl.	GCCAATCACATTGATTACGAAAAATGGAATAACCACCAAAGGAAGTTATCAAACGGCCCCA	
M4 L nucl.	GCCAATCACATTGATTACGAAAAATGGAATAACCACCAAAGGAAGTTATCAAACGGCCCCA	
GenBank L nucl.	1861	1920
HR L nucl.	GTGTTCCGAGTTATGGGCCAGTTCTTAGGTTATCCATCCTTAATCGAGAGAACTCATGAA	
M2 L nucl.	GTGTTCCGAGTTATGGGCCAGTTCTTAGGTTATCCATCCTTAATCGAGAGAACTCATGAA	
M4 L nucl.	GTGTTCCGAGTTATGGGCCAGTTCTTAGGTTATCCATCCTTAATCGAGAGAACTCATGAA	
GenBank L nucl.	1921	1980
HR L nucl.	TTTTTTGAGAAAAGTCTTATATACTACAATGGAAGACCAGACTTGATGCGTGTTTCAAC	
M2 L nucl.	TTTTTTGAGAAAAGTCTTATATACTACAATGGAAGACCAGACTTGATGCGTGTTTCAAC	
M4 L nucl.	TTTTTTGAGAAAAGTCTTATATACTACAATGGAAGACCAGACTTGATGCGTGTTTCAAC	
GenBank L nucl.	1981	2040
HR L nucl.	AACACACTGATCAATTCAACCTCCCAACGAGTTTGTGGCAAGGACAAGAGGGTGGACTG	
M2 L nucl.	AACACACTGATCAATTCAACCTCCCAACGAGTTTGTGGCAAGGACAAGAGGGTGGACTG	
M4 L nucl.	AACACACTGATCAATTCAACCTCCCAACGAGTTTGTGGCAAGGACAAGAGGGTGGACTG	

FIGURE 22-4

GenBank L nucl.	2041	2100
HR L nucl.	GAAGGTCTACGGCAAAAAGGATGGAGTATCCTCAATCTACTGGTTATTCAAAGAGAGGCT	
M2 L nucl.	GAAGGTCTACGGCAAAAAGGATGGAGTATCCTCAATCTACTGGTTATTCAAAGAGAGGCT	
M4 L nucl.	GAAGGTCTACGGCAAAAAGGATGGAGTATCCTCAATCTACTGGTTATTCAAAGAGAGGCT	
GenBank L nucl.	2101	2160
HR L nucl.	AAAATCAGAAACACTGCTGTCAAAGTCTTGGCACAAGGTGATAATCAAGTTATTTGCACA	
M2 L nucl.	AAAATCAGAAACACTGCTGTCAAAGTCTTGGCACAAGGTGATAATCAAGTTATTTGCACA	
M4 L nucl.	AAAATCAGAAACACTGCTGTCAAAGTCTTGGCACAAGGTGATAATCAAGTTATTTGCACA	
GenBank L nucl.	2161	2220
HR L nucl.	CAGTATAAAACGAAGAAATCGAGAAACGTTGTAGAATTACAGGGTGCTCTCAATCAAATG	
M2 L nucl.	CAGTATAAAACGAAGAAATCGAGAAACGTTGTAGAATTACAGGGTGCTCTCAATCAAATG	
M4 L nucl.	CAGTATAAAACGAAGAAATCGAGAAACGTTGTAGAATTACAGGGTGCTCTCAATCAAATG	
GenBank L nucl.	2221	2280
HR L nucl.	GTTTCTAATAATGAGAAAATTATGACTGCAATCAAAATAGGGACAGGGAAGTTAGGACTT	
M2 L nucl.	GTTTCTAATAATGAGAAAATTATGACTGCAATCAAAATAGGGACAGGGAAGTTAGGACTT	
M4 L nucl.	GTTTCTAATAATGAGAAAATTATGACTGCAATCAAAATAGGGACAGGGAAGTTAGGACTT	
GenBank L nucl.	2281	2340
HR L nucl.	TTGATAAATGACGATGAGACTATGCAATCTGCAGATTACTTGAATTATGGAAAAATACCG	
M2 L nucl.	TTGATAAATGACGATGAGACTATGCAATCTGCAGATTACTTGAATTATGGAAAAATACCG	
M4 L nucl.	TTGATAAATGACGATGAGACTATGCAATCTGCAGATTACTTGAATTATGGAAAAATACCG	
GenBank L nucl.	2341	2400
HR L nucl.	ATTTTCCGTGGAGTGATTAGAGGGTTAGAGACCAAGAGATGGTCACGAGTGACTTGTGTC	
M2 L nucl.	ATTTTCCGTGGAGTGATTAGAGGGTTAGAGACCAAGAGATGGTCACGAGTGACTTGTGTC	
M4 L nucl.	ATTTTCCGTGGAGTGATTAGAGGGTTAGAGACCAAGAGATGGTCACGAGTGACTTGTGTC	
GenBank L nucl.	2401	2460
HR L nucl.	ACCAATGACCAAATACCCACTTGTGCTAATATAATGAGCTCAGTTCCACAAATGCTCTC	
M2 L nucl.	ACCAATGACCAAATACCCACTTGTGCTAATATAATGAGCTCAGTTCCACAAATGCTCTC	
M4 L nucl.	ACCAATGACCAAATACCCACTTGTGCTAATATAATGAGCTCAGTTCCACAAATGCTCTC	
GenBank L nucl.	2461	2520
HR L nucl.	ACCGTAGCTCATTTTGCTGAGAACCCAATCAATGCCATGATACAGTACAATTATTTTGGG	
M2 L nucl.	ACCGTAGCTCATTTTGCTGAGAACCCAATCAATGCCATGATACAGTACAATTATTTTGGG	
M4 L nucl.	ACCGTAGCTCATTTTGCTGAGAACCCAATCAATGCCATGATACAGTACAATTATTTTGGG	
GenBank L nucl.	2521	2580
HR L nucl.	ACATTTGCTAGACTCTTGTTGATGATGCATGATCCTGCTCTTCGTCAATCATTGTATGAA	
M2 L nucl.	ACATTTGCTAGACTCTTGTTGATGATGCATGATCCTGCTCTTCGTCAATCATTGTATGAA	
M4 L nucl.	ACATTTGCTAGACTCTTGTTGATGATGCATGATCCTGCTCTTCGTCAATCATTGTATGAA	

FIGURE 22-5

GenBank L nucl.	2581	2640
HR L nucl.	GTTCAAGATAAGATAACCGGGCTTGCACAGTTCTACTTTCAAATACGCCATGTTGTATTTG	
M2 L nucl.	GTTCAAGATAAGATAACCGGGCTTGCACAGTTCTACTTTCAAATACGCCATGTTGTATTTG	
M4 L nucl.	.....	
	GTTCAAGATAAGATAACCGGGCTTGCACAGTTCTACTTTCAAATACGCCATGTTGTATTTG	
GenBank L nucl.	2641	2700
HR L nucl.	GACCCCTCCATTGGAGGAGTGTCTGGGCATGTCTTTGTCCAGGTTTTTGATTAGAGCCTTC	
M2 L nucl.	GACCCCTCCATTGGAGGAGTGTCTGGGCATGTCTTTGTCCAGGTTTTTGATTAGAGCCTTC	
M4 L nucl.	.....	
	GACCCCTCCATTGGAGGAGTGTCTGGGCATGTCTTTGTCCAGGTTTTTGATTAGAGCCTTC	
GenBank L nucl.	2701	2760
HR L nucl.	CCAGATCCCGTAACAGAAAGTCTCTCATTTCTGGAGATTTCATCCATGTACATGCTCGAAGT	
M2 L nucl.	CCAGATCCCGTAACAGAAAGTCTCTCATTTCTGGAGATTTCATCCATGTACATGCTCGAAGT	
M4 L nucl.	.....	
	CCAGATCCCGTAACAGAAAGTCTCTCATTTCTGGAGATTTCATCCATGTACATGCTCGAAGT	
GenBank L nucl.	2761	2820
HR L nucl.	GAGCATCTGAAGGAGATGAGTGCAGTATTTGGAAACCCCGAGATAGCCAAGTTTCGAATA	
M2 L nucl.	GAGCATCTGAAGGAGATGAGTGCAGTATTTGGAAACCCCGAGATAGCCAAGTTTCGAATA	
M4 L nucl.	.....	
	GAGCATCTGAAGGAGATGAGTGCAGTATTTGGAAACCCCGAGATAGCCAAGTTTCGAATA	
GenBank L nucl.	2821	2880
HR L nucl.	ACTCACATAGACAAGCTAGTAGAAGATCCAACCTCTCTGAACATCGCTATGGGAATGAGT	
M2 L nucl.	ACTCACATAGACAAGCTAGTAGAAGATCCAACCTCTCTGAACATCGCTATGGGAATGAGT	
M4 L nucl.	.....	
	ACTCACATAGACAAGCTAGTAGAAGATCCAACCTCTCTGAACATCGCTATGGGAATGAGT	
GenBank L nucl.	2881	2940
HR L nucl.	CCAGCGAACTTGTTAAAGACTGAGGTTAAAAAATGCTTAATCGAATCAAGACAAACCATC	
M2 L nucl.	CCAGCGAACTTGTTAAAGACTGAGGTTAAAAAATGCTTAATCGAATCAAGACAAACCATC	
M4 L nucl.	.....	
	CCAGCGAACTTGTTAAAGACTGAGGTTAAAAAATGCTTAATCGAATCAAGACAAACCATC	
GenBank L nucl.	2941	3000
HR L nucl.	AGGAACCAGGTGATTAAGGATGCAACCATATATTTGTATCATGAAGAGGATCGGCTCAGA	
M2 L nucl.	AGGAACCAGGTGATTAAGGATGCAACCATATATTTGTATCATGAAGAGGATCGGCTCAGA	
M4 L nucl.	.....	
	AGGAACCAGGTGATTAAGGATGCAACCATATATTTGTATCATGAAGAGGATCGGCTCAGA	
GenBank L nucl.	3001	3060
HR L nucl.	AGTTTCTTATGGTCAATAAAATCCTCTGTTCCCTAGATTTTTTAAGTGAATTCAAATCAGGC	
M2 L nucl.	AGTTTCTTATGGTCAATAAAATCCTCTGTTCCCTAGATTTTTTAAGTGAATTCAAATCAGGC	
M4 L nucl.	.....	
	AGTTTCTTATGGTCAATAAAATCCTCTGTTCCCTAGATTTTTTAAGTGAATTCAAATCAGGC	
GenBank L nucl.	3061	3120
HR L nucl.	ACTTTTTTGGGAGTCGCAGACGGGCTCATCAGTCTATTTCAAATTTCTCGTACTATTTCGG	
M2 L nucl.	ACTTTTTTGGGAGTCGCAGACGGGCTCATCAGTCTATTTCAAATTTCTCGTACTATTTCGG	
M4 L nucl.	.....	
	ACTTTTTTGGGAGTCGCAGACGGGCTCATCAGTCTATTTCAAATTTCTCGTACTATTTCGG	

FIGURE 22-6

GenBank L nucl.	3121	3180
HR L nucl.	AACTCCTTTAAGAAAAAGTATCATAGGGAATTGGATGATTTGATTGTGAGGAGTGAGGTA	
M2 L nucl.	AACTCCTTTAAGAAAAAGTATCATAGGGAATTGGATGATTTGATTGTGAGGAGTGAGGTA	
M4 L nucl.	AACTCCTTTAAGAAAAAGTATCATAGGGAATTGGATGATTTGATTGTGAGGAGTGAGGTA	
GenBank L nucl.	3181	3240
HR L nucl.	TCCTCTTTGACACATTTAGGGAACTTCATTTGAGAAGGGGATCATGTAAAATGTGGACA	
M2 L nucl.	TCCTCTTTGACACATTTAGGGAACTTCATTTGAGAAGGGGATCATGTAAAATGTGGACA	
M4 L nucl.	TCCTCTTTGACACATTTAGGGAACTTCATTTGAGAAGGGGATCATGTAAAATGTGGACA	
GenBank L nucl.	3241	3300
HR L nucl.	TGTTTCAGCTACTCATGCTGACACATTAAGATACAAATCCTGGGGCCGTACAGTTATTGGG	
M2 L nucl.	TGTTTCAGCTACTCATGCTGACACATTAAGATACAAATCCTGGGGCCGTACAGTTATTGGG	
M4 L nucl.	TGTTTCAGCTACTCATGCTGACACATTAAGATACAAATCCTGGGGCCGTACAGTTATTGGG	
GenBank L nucl.	3301	3360
HR L nucl.	ACAACGTGTACCCCATCCATTAGAAATGTTGGGTCCACAACATCGAAAAGAGACTCCTTGT	
M2 L nucl.	ACAACGTGTACCCCATCCATTAGAAATGTTGGGTCCACAACATCGAAAAGAGACTCCTTGT	
M4 L nucl.	ACAACGTGTACCCCATCCATTAGAAATGTTGGGTCCACAACATCGAAAAGAGACTCCTTGT	
GenBank L nucl.	3361	3420
HR L nucl.	GCACCATGTAACACATCAGGGTTCAATTATGTTTCTGTGCATTGTCCAGACGGGATCCAT	
M2 L nucl.	GCACCATGTAACACATCAGGGTTCAATTATGTTTCTGTGCATTGTCCAGACGGGATCCAT	
M4 L nucl.	GCACCATGTAACACATCAGGGTTCAATTATGTTTCTGTGCATTGTCCAGACGGGATCCAT	
GenBank L nucl.	3421	3480
HR L nucl.	GACGTCTTTAGTTTCACGGGGACCATTGCCTGCTTATCTAGGGTCTAAAACATCTGAATCT	
M2 L nucl.	GACGTCTTTAGTTTCACGGGGACCATTGCCTGCTTATCTAGGGTCTAAAACATCTGAATCT	
M4 L nucl.	GACGTCTTTAGTTTCACGGGGACCATTGCCTGCTTATCTAGGGTCTAAAACATCTGAATCT	
GenBank L nucl.	3481	3540
HR L nucl.	ACATCTATTTTGCAGCCTTGGGAAAGGGAAAGCAAAGTCCCACTGATTAAAAGAGCTACA	
M2 L nucl.	ACATCTATTTTGCAGCCTTGGGAAAGGGAAAGCAAAGTCCCACTGATTAAAAGAGCTACA	
M4 L nucl.	ACATCTATTTTGCAGCCTTGGGAAAGGGAAAGCAAAGTCCCACTGATTAAAAGAGCTACA	
GenBank L nucl.	3541	3600
HR L nucl.	CGTCTTAGAGATGCTATCTCTTGGTTTGTGTAACCCGACTCTAACTAGCAATGACTATA	
M2 L nucl.	CGTCTTAGAGATGCTATCTCTTGGTTTGTGTAACCCGACTCTAACTAGCAATGACTATA	
M4 L nucl.	CGTCTTAGAGATGCTATCTCTTGGTTTGTGTAACCCGACTCTAACTAGCAATGACTATA	
GenBank L nucl.	3601	3660
HR L nucl.	CTTTCTAACATCCACTCTTTAACAGGCGAAGAATGGACCAAAGGCAGCATGGGTTCAAA	
M2 L nucl.	CTTTCTAACATCCACTCTTTAACAGGCGAAGAATGGACCAAAGGCAGCATGGGTTCAAA	
M4 L nucl.	CTTTCTAACATCCACTCTTTAACAGGCGAAGAATGGACCAAAGGCAGCATGGGTTCAAA	

FIGURE 22-7



GenBank L nucl.	3661	3720
HR L nucl.	AGAACAGGGTCTGCCCTTCATAGGTTTTTCGACATCTCGGATGAGCCATGGTGGGTTTCGCA	
M2 L nucl.	AGAACAGGGTCTGCCCTTCATAGGTTTTTCGACATCTCGGATGAGCCATGGTGGGTTTCGCA	
M4 L nucl.	AGAACAGGGTCTGCCCTTCATAGGTTTTTCGACATCTCGGATGAGCCATGGTGGGTTTCGCA	
GenBank L nucl.	3721	3780
HR L nucl.	TCTCAGAGCACTGCAGCATTGACCAGGTTGATGGCAACTACAGACACCATGAGGGATCTG	
M2 L nucl.	TCTCAGAGCACTGCAGCATTGACCAGGTTGATGGCAACTACAGACACCATGAGGGATCTG	
M4 L nucl.	TCTCAGAGCACTGCAGCATTGACCAGGTTGATGGCAACTACAGACACCATGAGGGATCTG	
GenBank L nucl.	3781	3840
HR L nucl.	GGAGATCAGAATTTTCGACTTTTTATTCCAAGCAACGTTGCTCTATGCTCAATTACCACC	
M2 L nucl.	GGAGATCAGAATTTTCGACTTTTTATTCCAAGCAACGTTGCTCTATGCTCAATTACCACC	
M4 L nucl.	GGAGATCAGAATTTTCGACTTTTTATTCCAAGCAACGTTGCTCTATGCTCAATTACCACC	
GenBank L nucl.	3841	3900
HR L nucl.	ACTGTTGCAAGAGACGGATGGATCACCAGTTGTACAGATCATTATCATATTGCCTGTAAG	
M2 L nucl.	ACTGTTGCAAGAGACGGATGGATCACCAGTTGTACAGATCATTATCATATTGCCTGTAAG	
M4 L nucl.	ACTGTTGCAAGAGACGGATGGATCACCAGTTGTACAGATCATTATCATATTGCCTGTAAG	
GenBank L nucl.	3901	3960
HR L nucl.	TCCTGTTTGAGACCCATAGAAGAGATCACCTGGACTCAAGTATGGACTACACGCCCCCA	
M2 L nucl.	TCCTGTTTGAGACCCATAGAAGAGATCACCTGGACTCAAGTATGGACTACACGCCCCCA	
M4 L nucl.	TCCTGTTTGAGACCCATAGAAGAGATCACCTGGACTCAAGTATGGACTACACGCCCCCA	
GenBank L nucl.	3961	4020
HR L nucl.	GATGTATCCCATGTGCTGAAGACATGGAGGAATGGGGAAGGTTCTGTTGGGACAAGAGATA	
M2 L nucl.	GATGTATCCCATGTGCTGAAGACATGGAGGAATGGGGAAGGTTCTGTTGGGACAAGAGATA	
M4 L nucl.	GATGTATCCCATGTGCTGAAGACATGGAGGAATGGGGAAGGTTCTGTTGGGACAAGAGATA	
GenBank L nucl.	4021	4080
HR L nucl.	AAACAGATCTATCCTTTAGAAAGGAATTGGAAGAATTTAGCACCTGCTGAGCAATCCTAT	
M2 L nucl.	AAACAGATCTATCCTTTAGAAAGGAATTGGAAGAATTTAGCACCTGCTGAGCAATCCTAT	
M4 L nucl.	AAACAGATCTATCCTTTAGAAAGGAATTGGAAGAATTTAGCACCTGCTGAGCAATCCTAT	
GenBank L nucl.	4081	4140
HR L nucl.	CAAGTCGGCAGATGTATAGGTTTTCTATATGGAGACTTGGCGTATAGAAAATCTACTCAT	
M2 L nucl.	CAAGTCGGCAGATGTATAGGTTTTCTATATGGAGACTTGGCGTATAGAAAATCTACTCAT	
M4 L nucl.	CAAGTCGGCAGATGTATAGGTTTTCTATATGGAGACTTGGCGTATAGAAAATCTACTCAT	
GenBank L nucl.	4141	4200
HR L nucl.	GCCGAGGACAGTTCTCTATTTCTCTATCTATACAAGGTCGTATTAGAGGTCGAGGTTTC	
M2 L nucl.	GCCGAGGACAGTTCTCTATTTCTCTATCTATACAAGGTCGTATTAGAGGTCGAGGTTTC	
M4 L nucl.	GCCGAGGACAGTTCTCTATTTCTCTATCTATACAAGGTCGTATTAGAGGTCGAGGTTTC	

FIGURE 22-8

GenBank L nucl.	4201	4260
HR L nucl.	TTAAAAGGGTTGCTAGACGGATTAATGAGAGCAAGTTGCTGCCAAGTAATACACCGGAGA	
M2 L nucl.	TTAAAAGGGTTGCTAGACGGATTAATGAGAGCAAGTTGCTGCCAAGTAATACACCGGAGA	
M4 L nucl.	TTAAAAGGGTTGCTAGACGGATTAATGAGAGCAAGTTGCTGCCAAGTAATACACCGGAGA	
GenBank L nucl.	4261	4320
HR L nucl.	AGTCTGGCTCATTTGAAGAGGCCGGCCAACGCAGTGACGGAGGTTTGATTTACTTGATT	
M2 L nucl.	AGTCTGGCTCATTTGAAGAGGCCGGCCAACGCAGTGACGGAGGTTTGATTTACTTGATT	
M4 L nucl.	AGTCTGGCTCATTTGAAGAGGCCGGCCAACGCAGTGACGGAGGTTTGATTTACTTGATT	
GenBank L nucl.	4321	4380
HR L nucl.	GATAAATTGAGTGATCACCTCCATTCCCTTTCTCTTACTAGATCAGGACCTATTAGAGAC	
M2 L nucl.	GATAAATTGAGTGATCACCTCCATTCCCTTTCTCTTACTAGATCAGGACCTATTAGAGAC	
M4 L nucl.	GATAAATTGAGTGATCACCTCCATTCCCTTTCTCTTACTAGATCAGGACCTATTAGAGAC	
GenBank L nucl.	4381	4440
HR L nucl.	GAATTAGAAAACGATTCCCCACAAGATCCCAACCTCCTATCCGACAAGCAACCGTGATATG	
M2 L nucl.	GAATTAGAAAACGATTCCCCACAAGATCCCAACCTCCTATCCGACAAGCAACCGTGATATG	
M4 L nucl.	GAATTAGAAAACGATTCCCCACAAGATCCCAACCTCCTATCCGACAAGCAACCGTGATATG	
GenBank L nucl.	4441	4500
HR L nucl.	GGGGTGATTGTCAGAAATTACTTCAAATACCAATGCCGTCTAATTGAAAAGGGAAAATAC	
M2 L nucl.	GGGGTGATTGTCAGAAATTACTTCAAATACCAATGCCGTCTAATTGAAAAGGGAAAATAC	
M4 L nucl.	GGGGTGATTGTCAGAAATTACTTCAAATACCAATGCCGTCTAATTGAAAAGGGAAAATAC	
GenBank L nucl.	4501	4560
HR L nucl.	AGATCACATTATTTCACAATTATGGTTATTCTCAGATGTCTTATCCATAGACTTCATTGGA	
M2 L nucl.	AGATCACATTATTTCACAATTATGGTTATTCTCAGATGTCTTATCCATAGACTTCATTGGA	
M4 L nucl.	AGATCACATTATTTCACAATTATGGTTATTCTCAGATGTCTTATCCATAGACTTCATTGGA	
GenBank L nucl.	4561	4620
HR L nucl.	CCATTCTCTATTTCCACCACCCTCTTGCAAATCCTATACAAGCCATTTTTATCTGGGAAA	
M2 L nucl.	CCATTCTCTATTTCCACCACCCTCTTGCAAATCCTATACAAGCCATTTTTATCTGGGAAA	
M4 L nucl.	CCATTCTCTATTTCCACCACCCTCTTGCAAATCCTATACAAGCCATTTTTATCTGGGAAA	
GenBank L nucl.	4621	4680
HR L nucl.	GATAAGAATGAGTTGAGAGAGCTGGCAAATCTTTCTTCATTGCTAAGATCAGGAGAGGGG	
M2 L nucl.	GATAAGAATGAGTTGAGAGAGCTGGCAAATCTTTCTTCATTGCTAAGATCAGGAGAGGGG	
M4 L nucl.	GATAAGAATGAGTTGAGAGAGCTGGCAAATCTTTCTTCATTGCTAAGATCAGGAGAGGGG	
GenBank L nucl.	4681	4740
HR L nucl.	TGGGAAGACATACATGTGAAATTCTTCACCAAGGACATATTATTGTGTCCAGAGGAAATC	
M2 L nucl.	TGGGAAGACATACATGTGAAATTCTTCACCAAGGACATATTATTGTGTCCAGAGGAAATC	
M4 L nucl.	TGGGAAGACATACATGTGAAATTCTTCACCAAGGACATATTATTGTGTCCAGAGGAAATC	

FIGURE 22-9

	4741		4800
GenBank L nucl.	AGACATGCTTGCAAGTTCGGGATTGCTAAGGATAATAATAAAGACATGAGCTATCCCCCT		
HR L nucl.	AGACATGCTTGCAAGTTCGGGATTGCTAAGGATAATAATAAAGACATGAGCTATCCCCCT		
M2 L nucl.	.....		
M4 L nucl.	AGACATGCTTGCAAGTTCGGGATTGCTAAGGATAATAATAAAGACATGAGCTATCCCCCT		
	4801		4860
GenBank L nucl.	TGGGGAAGGGAATCCAGAGGGACAATTACAACAATCCCTGTTTATTATACGACCACCCCT		
HR L nucl.	TGGGGAAGGGAATCCAGAGGGACAATTACAACAATCCCTGTTTATTATACGACCACCCCT		
M2 L nucl.	.....		
M4 L nucl.	TGGGGAAGGGAATCCAGAGGGACAATTACAACAATCCCTGTTTATTATACGACCACCCCT		
	4861		4920
GenBank L nucl.	TACCCAAAGATGCTAGAGATGCCTCCAAGAATCCAAAATCCCCTGCTGTCCGGAATCAGG		
HR L nucl.	TACCCAAAGATGCTAGAGATGCCTCCAAGAATCCAAAATCCCCTGCTGTCCGGAATCAGG		
M2 L nucl.	.....		
M4 L nucl.	TACCCAAAGATGCTAGAGATGCCTCCAAGAATCCAAAATCCCCTGCTGTCCGGAATCAGG		
	4921		4980
GenBank L nucl.	TTGGGCCAATTACCAACTGGCGCTCATTATAAAATTTCGGAGTATATTACATGGAATGGGA		
HR L nucl.	TTGGGCCAGTTACCAACTGGCGCTCATTATAAAATTTCGGAGTATATTACATGGAATGGGA		
M2 L nucl.	.....		
M4 L nucl.	TTGGGCCAGTTACCAACTGGCGCTCATTATAAAATTTCGGAGTATATTACATGGAATGGGA		
	4981		5040
GenBank L nucl.	ATCCATTACAGGGACTTCTTGAGTTGTGGAGACGGCTCCGGAGGGATGACTGCTGCATTA		
HR L nucl.	ATCCATTACAGGGACTTCTTGAGTTGTGGAGACGGCTCCGGAGGGATGACTGCTGCATTA		
M2 L nucl.	.....		
M4 L nucl.	ATCCATTACAGGGACTTCTTGAGTTGTGGAGACGGCTCCGGAGGGATGACTGCTGCATTA		
	5041		5100
GenBank L nucl.	CTACGAGAAAAATGTGCATAGCAGAGGAATATTCAATAGTCTGTTAGAATTATCAGGGTCA		
HR L nucl.	CTACGAGAAAAATGTGCATAGCAGAGGAATATTCAATAGTCTGTTAGAATTATCAGGGTCA		
M2 L nucl.	.....		
M4 L nucl.	CTACGAGAAAAATGTGCATAGCAGAGGAATATTCAATAGTCTGTTAGAATTATCAGGGTCA		
	5101		5160
GenBank L nucl.	GTCATGCGAGGCGCCTCTCCTGAGCCCCCAGTGCCCTAGAACTTTAGGAGGAGATAAA		
HR L nucl.	GTCATGCGAGGCGCCTCTCCTGAGCCCCCAGTGCCCTAGAACTTTAGGAGGAGATAAA		
M2 L nucl.	.....		
M4 L nucl.	GTCATGCGAGGCGCCTCTCCTGAGCCCCCAGTGCCCTAGAACTTTAGGAGGAGATAAA		
	5161		5220
GenBank L nucl.	TCGAGATGTGTAAATGGTGAAACATGTTGGGAATATCCATCTGACTTATGTGACCCAAGG		
HR L nucl.	TCGAGATGTGTAAATGGTGAAACATGTTGGGAATATCCATCTGACTTATGTGACCCAAGG		
M2 L nucl.	.....		
M4 L nucl.	TCGAGATGTGTAAATGGTGAAACATGTTGGGAATATCCATCTGACTTATGTGACCCAAGG		
	5221		5280
GenBank L nucl.	ACTTGGGACTATTTCCCTCCGACTCAAAGCAGGCTTGGGGCTTCAAATTGATTTAATTGTA		
HR L nucl.	ACTTGGGACTATTTCCCTCCGACTCAAAGCAGGCTTGGGGCTTCAAATTGATTTAATTGTA		
M2 L nucl.	.....		
M4 L nucl.	ACTTGGGACTATTTCCCTCCGACTCAAAGCAGGCTTGGGGCTTCAAATTGATTTAATTGTA		

FIGURE 22-10

GenBank L nucl.	5281	5340
HR L nucl.	ATGGATATGGAAGTTCGGGATTCTTCTACTAGCCTGAAAATTGAGACGAATGTTAGAAAT	
M2 L nucl.	ATGGATATGGAAGTTCGGGATTCTTCTACTAGCCTGAAAATTGAGACGAATGTTAGAAAT	
M4 L nucl.	.....	
	ATGGATATGGAAGTTCGGGATTCTTCTACTAGCCTGAAAATTGAGACGAATGTTAGAAAT	
GenBank L nucl.	5341	5400
HR L nucl.	TATGTGCACCGGATTTTGGATGAGCAAGGAGTTTAAATCTACAAGACTTATGGAACATAT	
M2 L nucl.	TATGTGCACCGGATTTTGGATGAGCAAGGAGTTTAAATCTACAAGACTTATGGAACATAT	
M4 L nucl.	.....	
	TATGTGCACCGGATTTTGGATGAGCAAGGAGTTTAAATCTACAAGACTTATGGAACATAT	
GenBank L nucl.	5401	5460
HR L nucl.	ATTTGTGAGAGCGAAAAGAATGCAGTAACAATCCTTGGTCCCATGTTCAAGACGGTCGCAC	
M2 L nucl.	ATTTGTGAGAGCGAAAAGAATGCAGTAACAATCCTTGGTCCCATGTTCAAGACGGTCGCAC	
M4 L nucl.	.....	
	ATTTGTGAGAGCGAAAAGAATGCAGTAACAATCCTTGGTCCCATGTTCAAGACGGTCGCAC	
GenBank L nucl.	5461	5520
HR L nucl.	TTAGTTCAAACAGAATTTAGTAGTTCTCAAACGTCTGAAGTATATATGGTATGTAAAGGT	
M2 L nucl.	TTAGTTCAAACAGAATTTAGTAGTTCTCAAACGTCTGAAGTATATATGGTATGTAAAGGT	
M4 L nucl.	.....	
	TTAGTTCAAACAGAATTTAGTAGTTCTCAAACGTCTGAAGTATATATGGTATGTAAAGGT	
GenBank L nucl.	5521	5580
HR L nucl.	TTGAAGAAATTAATCGATGAACCCAATCCCGATTGGTCTTCCATCAATGAATCCTGGAAA	
M2 L nucl.	TTGAAGAAATTAATCGATGAACCCAATCCCGATTGGTCTTCCATCAATGAATCCTGGAAA	
M4 L nucl.	.....	
	TTGAAGAAATTAATCGATGAACCCAATCCCGATTGGTCTTCCATCAATGAATCCTGGAAA	
GenBank L nucl.	5581	5640
HR L nucl.	AACCTGTACGCATTCCAGTCATCAGAACAGGAATTTGCCAGAGCAAAGAAGGTTAGTACA	
M2 L nucl.	AACCTGTACGCATTCCAGTCATCAGAACAGGAATTTGCCAGAGCAAAGAAGGTTAGTACA	
M4 L nucl.	.....	
	AACCTGTACGCATTCCAGTCATCAGAACAGGAATTTGCCAGAGCAAAGAAGGTTAGTACA	
GenBank L nucl.	5641	5700
HR L nucl.	TACTTTACCTTGACAGGTATTCCCTCCCAATTCATTCCTGATCCTTTTGTGAACATTGAG	
M2 L nucl.	TACTTTACCTTGACAGGTATTCCCTCCCAATTCATTCCTGATCCTTTTGTGAACATTGAG	
M4 L nucl.	.....	
	TACTTTACCTTGACAGGTATTCCCTCCCAATTCATTCCTGATCCTTTTGTGAACATTGAG	
GenBank L nucl.	5701	5760
HR L nucl.	ACTATGCTACAAATATTTCGGAGTACCCACGGGTGTGTCTCATGCGGCTGCCTTAAATCA	
M2 L nucl.	ACTATGCTACAAATATTTCGGAGTACCCACGGGTGTGTCTCATGCGGCTGCCTTAAATCA	
M4 L nucl.	.....	
	ACTATGCTACAAATATTTCGGAGTACCCACGGGTGTGTCTCATGCGGCTGCCTTAAATCA	
GenBank L nucl.	5761	5820
HR L nucl.	TCTGATAGACCTGCAGATTTATTGACCATTAGCCTTTTTTATATGGCGATTATATCGTAT	
M2 L nucl.	TCTGATAGACCTGCAGATTTATTGACCATTAGCCTTTTTTATATGGCGATTATATCGTAT	
M4 L nucl.	.....	
	TCTGATAGACCTGCAGATTTATTGACCATTAGCCTTTTTTATATGGCGATTATATCGTAT	

FIGURE 22-11

GenBank L nucl.	5821	5880
HR L nucl.	TATAACATCAATCATATCAGAGTAGGACCGATACCTCCGAACCCCCCATCAGATGGAATT	
M2 L nucl.	TATAACATCAATCATATCAGAGTAGGACCGATACCTCCGAACCCCCCATCAGATGGAATT	
M4 L nucl.	.....	
	TATAACATCAATCATATCAGAGTAGGACCGATACCTCCGAACCCCCCATCAGATGGAATT	
GenBank L nucl.	5881	5940
HR L nucl.	GCACAAAATGTGGGGATCGCTATAACTGGTATAAGCTTTTGGCTGAGTTTGATGGAGAAA	
M2 L nucl.	GCACAAAATGTGGGGATCGCTATAACTGGTATAAGCTTTTGGCTGAGTTTGATGGAGAAA	
M4 L nucl.	.....	
	GCACAAAATGTGGGGATCGCTATAACTGGTATAAGCTTTTGGCTGAGTTTGATGGAGAAA	
GenBank L nucl.	5941	6000
HR L nucl.	GACATTCCACTATATCAACAGTGTTTAGCAGTTATCCAGCAATCATTCCCGATTAGGTGG	
M2 L nucl.	GACATTCCACTATATCAACAGTGTTTAGCAGTTATCCAGCAATCATTCCCGATTAGGTGG	
M4 L nucl.	.....	
	GACATTCCACTATATCAACAGTGTTTAGCAGTTATCCAGCAATCATTCCCGATTAGGTGG	
GenBank L nucl.	6001	6060
HR L nucl.	GAGGCTGTTTCAGTAAAAGGAGGATACAAGCAGAAGTGGAGTACTAGAGGTGATGGGCTC	
M2 L nucl.	GAGGCTGTTTCAGTAAAAGGAGGATACAAGCAGAAGTGGAGTACTAGAGGTGATGGGCTC	
M4 L nucl.	.....	
	GAGGCTGTTTCAGTAAAAGGAGGATACAAGCAGAAGTGGAGTACTAGAGGTGATGGGCTC	
GenBank L nucl.	6061	6120
HR L nucl.	CCAAAAGATACCCGAATTTTCAGACTCCTTGGCCCCAATCGGGAACCTGGATCAGATCTCTG	
M2 L nucl.	CCAAAAGATACCCGAATTTTCAGACTCCTTGGCCCCAATCGGGAACCTGGATCAGATCTCTG	
M4 L nucl.	.....	
	CCAAAAGATACCCGAATTTTCAGACTCCTTGGCCCCAATCGGGAACCTGGATCAGATCTCTG	
GenBank L nucl.	6121	6180
HR L nucl.	GAATTGGTCCGAAACCAAGTTCGTCTAAATCCATTCAATGAGATCTTGTTCAATCAGCTA	
M2 L nucl.	GAATTGGTCCGAAACCAAGTTCGTCTAAATCCATTCAATGAGATCTTGTTCAATCAGCTA	
M4 L nucl.	.....	
	GAATTGGTCCGAAACCAAGTTCGTCTAAATCCATTCAATGAGATCTTGTTCAATCAGCTA	
GenBank L nucl.	6181	6240
HR L nucl.	TGTCGTACAGTGGATAATCATTGAAATGGTCAAATTTGCGAAATGAAACACAGGAATGATT	
M2 L nucl.	TGTCGTACAGTGGATAATCATTGAAATGGTCAAATTTGCGAAAAACACAGGAATGATT	
M4 L nucl.	.....	
	TGTCGTACAGTGGATAATCATTGAAATGGTCAAATTTGCGAAAAACACAGGAATGATT	
GenBank L nucl.	6241	6300
HR L nucl.	GAATGGATCAATAGACGAATTTCAAAGAAGACCGGTCTATACTGATGTTGAAGAGTGAC	
M2 L nucl.	GAATGGATCAATAGACGAATTTCAAAGAAGACCGGTCTATACTGATGTTGAAGAGTGAC	
M4 L nucl.	.....	
	GAATGGATCAATAGACGAATTTCAAAGAAGACCGGTCTATACTGATGTTGAAGAGTGAC	

FIGURE 22-12

	6301		6360
GenBank L nucl.	CTACA	GAGGAAA	CTCTTGGAGAGATTAA.....
HR L nucl.	CTACATGAGGAAA	CTCTTGGAGAGATTAAAAAATCATGAGGAGACTCCAAACTTTAAGT	
M2 L nucl.	.....		
M4 L nucl.	CTACATGAGGAAA	CTCTTGGAGAGATTAA.....	
	6361		6395
GenBank L nucl.	.....		
HR L nucl.	ATGAAAAAA	ACTTTGATCCTTAAGACCCTCTTGTG	
M2 L nucl.	.....		
M4 L nucl.	.....		

**FIGURE 22-13**

GenBank L	a.a.	1	60
HR L a.a.		MEVHDFETDEFNDFNEDDYATREFLNPDERMTYLNHADYNLNSPLISDDIDNLIRKFNSL	
M4 L a.a.		MEVHDFETDEFNDFNEDDYATREFLNPDERMTYLNHADYNLNSPLISDDIDNLIRKFNSL	
GenBank L	a.a.	61	120
HR L a.a.		PIPSMWDSKNWDGVLEMLTSCQANPISTSQMHKWMGSWLMSDNHDASQGYSFLHEVDKEA	
M4 L a.a.		PIPSMWDSKNWDGVLEMLTSCQANPISTSQMHKWMGSWLMSDNHDASQGYSFLHEVDKEA	
GenBank L	a.a.	121	180
HR L a.a.		EITFDVVETFIRGWGNKPIEYIKKERWTDSFKILAYLCQKFLDLHKLTLILNAVSEVELL	
M4 L a.a.		EITFDVVETFIRGWGNKPIEYIKKERWTDSFKILAYLCQKFLDLHKLTLILNAVSEVELL	
GenBank L	a.a.	181	240
HR L a.a.		NLARTFKGKVRSSSHGTNICKRVPSLGPTFISEGWAYFKKLDILMDRNFLLMVKDVIIG	
M4 L a.a.		NLARTFKGKVRSSSHGTNICKRVPSLGPTFISEGWAYFKKLDILMDRNFLLMVKDVIIG	
GenBank L	a.a.	241	300
HR L a.a.		RMQTVLSMVCRIDNLFSEQDIFSLNLIYRIGDKIVERQGNFSYDLIKMVEPICNLRLMKL	
M4 L a.a.		RMQTVLSMVCRIDNLFSEQDIFSLNLIYRIGDKIVERQGNFSYDLIKMVEPICNLRLMKL	
GenBank L	a.a.	301	360
HR L a.a.		ARESRLVPQFPHFENHIKTSVDEGAKIDRGIRFLHDQIMSVKTVDLTLVIYGSFRHWGH	
M4 L a.a.		ARESRLVPQFPHFENHIKTSVDEGAKIDRGIRFLHDQIMSVKTVDLTLVIYGSFRHWGH	
GenBank L	a.a.	361	420
HR L a.a.		PFIDYYAGLEKLHSQVTMKKDIDVSYAKALASDLARIVLFQQFNDHKKWVFVNGDLLPHDH	
M4_L.pro		PFIDYYAGLEKLHSQVTMKKDIDVSYAKALASDLARIVLFQQFNDHKKWVFVNGDLLPHDH	
GenBank L	a.a.	421	480
HR L a.a.		PFKSHVKENTWPTAAQVQDFGDKWHELPLIKCFEIPDLLDPSIIYSDKSHSMNRSEVLKH	
M4 L a.a.		PFKSHVKENTWPTAAQVQDFGDKWHELPLIKCFEIPDLLDPSIIYSDKSHSMNRSEVLKH	
GenBank L	a.a.	481	540
HR L a.a.		VRMNPNTPIPSKKVLQTMLDTKATNWKEFLKEIDEKGLDDDDLIIGLKGKERELKLAGRF	
M4 L a.a.		VRMNPNTPIPSKKVLQTMLDTKATNWKEFLKEIDEKGLDDDDLIIGLKGKERELKLAGRF	
GenBank L	a.a.	541	600
HR L a.a.		FSLMSWKLREYFVITEYLIKTHFVPMFKGLTMADDLTAVIKKMLDSSSGQGLKSYEAICI	
M4 L a.a.		FSLMSWKLREYFVITEYLIKTHFVPMFKGLTMADDLTAVIKKMLDSSSGQGLKSYEAICI	

FIGURE 23-1

GenBank L	a.a.	601	660
HR L a.a.		ANHIDYEKWNHQRKLSNGPVFRVMGQFLGYPSLIERTHEFFEKSIIYNGRPDLMRVHN	
M4 L a.a.		ANHIDYEKWNHQRKLSNGPVFRVMGQFLGYPSLIERTHEFFEKSIIYNGRPDLMRVHN	
GenBank L	a.a.	661	720
HR L a.a.		NTLINSTSQRVCWQGQEGGLEGLRQKGWILNLLVIQREAKIRNTAVKVLAQGDNOVICT	
M4 L a.a.		NTLINSTSQRVCWQGQEGGLEGLRQKGWSILNLLVIQREAKIRNTAVKVLAQGDNOVICT	
GenBank L	a.a.	721	780
HR L a.a.		QYKTKKSRNVVELQGALNQMVSNNEKIMTAIKIGTGKLGLLINDDETMQSADYLNYGKIP	
M4 L a.a.		QYKTKKSRNVVELQGALNQMVSNNEKIMTAIKIGTGKLGLLINDDETMQSADYLNYGKIP	
GenBank L	a.a.	781	840
HR L a.a.		IFRGVIRGLETKRWSRVTCVTNDQIPTCANIMSSVSTNALTVAHFAENPINAMIQYNYFG	
M4 L a.a.		IFRGVIRGLETKRWSRVTCVTNDQIPTCANIMSSVSTNALTVAHFAENPINAMIQYNYFG	
GenBank L	a.a.	841	900
HR L a.a.		TFARLLLMMHDPALRQSLYEVQDKIPGLHSSTFKYAMLYLDPSIGGVSGMSLSRFLIRAF	
M4 L a.a.		TFARLLLMMHDPALRQSLYEVQDKIPGLHSSTFKYAMLYLDPSIGGVSGMSLSRFLIRAF	
GenBank L	a.a.	901	960
HR L a.a.		PDPVTESLSFWRFIHVHARSEHLKEMSAVFGNPEIAKFRITHIDKLVEDPTSLNIAMGMS	
M4 L a.a.		PDPVTESLSFWRFIHVHARSEHLKEMSAVFGNPEIAKFRITHIDKLVEDPTSLNIAMGMS	
GenBank L	a.a.	961	1020
HR L a.a.		PANLLKTEVKKCLIESRQTIRNQVIKDATIYLYHEEDRLRSFLWSINPLFPRFLSEFKSG	
M4 L a.a.		PANLLKTEVKKCLIESRQTIRNQVIKDATIYLYHEEDRLRSFLWSINPLFPRFLSEFKSG	
GenBank L	a.a.	1021	1080
HR L a.a.		TFLGVADGLISLFQNSRTIRNSFKKKYHREDDDLIVRSEVSSLTHLGKLHLRRGCKMWT	
M4 L a.a.		TFLGVADGLISLFQNSRTIRNSFKKKYHREDDDLIVRSEVSSLTHLGKLHLRRGCKMWT	
GenBank L	a.a.	1081	1140
HR L a.a.		CSATHADTLRYKSWGRTVIGTTVPHPLEMLGPQHRKETPCAPCNTSGFNYSVHCPDGIH	
M4 L a.a.		CSATHADTLRYKSWGRTVIGTTVPHPLEMLGPQHRKETPCAPCNTSGFNYSVHCPDGIH	
GenBank L	a.a.	1141	1200
HR L a.a.		DVFSSRGPLPAYLGSKTSESTSILOPWERESKVPLIKRATRLRDAISWFVEPD SKLAMTI	
M4 L a.a.		DVFSSRGPLPAYLGSKTSESTSILOPWERESKVPLIKRATRLRDAISWFVEPD SKLAMTI	

FIGURE 23-2



GenBank L	a.a.	1201	1260
HR L a.a.		LSNIHSLTGEEWTKRQHGFKRTGSALHRFSTSRMSHGGFASQSTAALTRLMATTTDTMRDL	
M4 L a.a.		LSNIHSLTGEEWTKRQHGFKRTGSALHRFSTSRMSHGGFASQSTAALTRLMATTTDTMRDL	
GenBank L	a.a.	1261	1320
HR L a.a.		GDQNFDFLFQATLLYAQITTTVARDGWITSCTDHYHIACKSCLRPIEEITLDSSMDYTPP	
M4 L a.a.		GDQNFDFLFQATLLYAQITTTVARDGWITSCTDHYHIACKSCLRPIEEITLDSSMDYTPP	
GenBank L	a.a.	1321	1380
HR L a.a.		DVSHVLKTRWRNGEGSWGQEIQIYPLEGNWKNLAPAEQSYQVGRGICIGFLYGDLAYRKSTH	
M4 L a.a.		DVSHVLKTRWRNGEGSWGQEIQIYPLEGNWKNLAPAEQSYQVGRGICIGFLYGDLAYRKSTH	
GenBank L	a.a.	1381	1440
HR L a.a.		AEDSSLFPLSIQGRIRGRGFLKGLLDGLMRASCCQVIHRRSLAHLKRPANAVYGGGLIYLI	
M4 L a.a.		AEDSSLFPLSIQGRIRGRGFLKGLLDGLMRASCCQVIHRRSLAHLKRPANAVYGGGLIYLI	
GenBank L	a.a.	1441	1500
HR L a.a.		DKLSVSPFFLSLTRSGPIRDELETIPHKIPTSYPSTNRDMGVIVRNYFKYQCRLIEKGKY	
M4 L a.a.		DKLSVSPFFLSLTRSGPIRDELETIPHKIPTSYPSTNRDMGVIVRNYFKYQCRLIEKGKY	
GenBank L	a.a.	1501	1560
HR L a.a.		RSHYSQLWLFSDVLSIDFIGPFSISTTLLQILYKPFSLGDKKNELRELANLSSLLRSSEG	
M4 L a.a.		RSHYSQLWLFSDVLSIDFIGPFSISTTLLQILYKPFSLGDKKNELRELANLSSLLRSSEG	
GenBank L	a.a.	1561	1620
HR L a.a.		WEDIHVKFFTKDILLCPPEIRHACKFGIAKDNNKDMSYPPWGRESRGTTITTI PVYYTTTP	
M4 L a.a.		WEDIHVKFFTKDILLCPPEIRHACKFGIAKDNNKDMSYPPWGRESRGTTITTI PVYYTTTP	
GenBank L	a.a.	1621	1680
HR L a.a.		YPKMLEMPPRIQNPLLSGIRLGQLPTGAHYKIRSILHGMGIHYRDFLSCGDGSGGMTAAL	
M4 L a.a.		YPKMLEMPPRIQNPLLSGIRLGQLPTGAHYKIRSILHGMGIHYRDFLSCGDGSGGMTAAL	
GenBank L	a.a.	1681	1740
HR L a.a.		LRENVHSGRIFNSLLELSGSVMRGASPEPPSALETLGDKSRCVNGETCWEYPSDLCDPR	
M4 L a.a.		LRENVHSGRIFNSLLELSGSVMRGASPEPPSALETLGDKSRCVNGETCWEYPSDLCDPR	
GenBank L	a.a.	1741	1800
HR L a.a.		TWDYFLRLKAGLGLQIDLIVMDMEVRDSSTSLKIETNVRNYVHRILDEQGVLIYKTYGTY	
M4 L a.a.		TWDYFLRLKAGLGLQIDLIVMDMEVRDSSTSLKIETNVRNYVHRILDEQGVLIYKTYGTY	
GenBank L	a.a.	1801	1860
HR L a.a.		ICESEKNAVITILGPMFKTVDLVQTEFSSSQTSEVYMVCKGLKKLIDEPNPDWSSINESWK	
M4 L a.a.		ICESEKNAVITILGPMFKTVDLVQTEFSSSQTSEVYMVCKGLKKLIDEPNPDWSSINESWK	

FIGURE 23-3

GenBank L	a.a.	1861	1920
HR L	a.a.	NLYAFQSSEQEFARAKKVSTYFTLTGIPSQFIPDPFVNIETMLQIFGVPTGVSHAAALKS	
M4 L	a.a.	NLYAFQSSEQEFARAKKVSTYFTLTGIPSQFIPDPFVNIETMLQIFGVPTGVSHAAALKS	
GenBank L	a.a.	1921	1980
HR L	a.a.	SDRPADLLTISLFYMAIISYYNINHIRVGPIPPNPPSDGIAQNVGIAITGISFWLSLMEK	
M4 L	a.a.	SDRPADLLTISLFYMAIISYYNINHIRVGPIPPNPPSDGIAQNVGIAITGISFWLSLMEK	
GenBank L	a.a.	1981	2040
HR L	a.a.	DIPLYQQCLAVIQQSFPPIRWEAVSVKGGYKQKWSTRGDGLPKDTRISDSLAPIGNWIRSL	
M4 L	a.a.	DIPLYQQCLAVIQQSFPPIRWEAVSVKGGYKQKWSTRGDGLPKDTRISDSLAPIGNWIRSL	
GenBank L	a.a.	2041	2100
HR L	a.a.	ELVRNQVRLNPFNEILFNQLCRTVDNHLKWSNLRKNTGMIEWINRRISKEDRSILMLKSD	
M4 L	a.a.	ELVRNQVRLNPFNEILFNQLCRTVDNHLKWSNLRKNTGMIEWINRRISKEDRSILMLKSD	
GenBank L	a.a.	2101	2110
HR L	a.a.	LHEENSWRD	
M4 L	a.a.	LHEENSWRD	

FIGURE 23-4